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# Women in Industry

BY

C. E. KNOEPPEL

An address based on Answers to 1000 Questionnaires on Women in Industry delivered before the National Conference on "Labor Problems Under War Conditions." Under Joint Auspices of the Society of Industrial Engineers and the Western Efficiency Society, Chicago, Ill., March, 1918

C. E. KNOEPPEL & CO., Inc.
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# WOMAN IN INDUSTRY

**By C. E. Knoeppel**

### Are Women Going to Be Needed in Industry?

The first question to answer, in considering this great subject, is whether or not we need women in large numbers in industry. If not, any extended treatment or discussion of the subject is unnecessary. If we do, then the next question to decide is, whether we will need them now, or later on.

To answer the first question, three important and vital factors must be taken into consideration, **most seriously.**

1. The present military situation.
2. German strategy.
3. The shipping situation.

### The Present Military Situation

Germany in addition to controlling the destinies of Austria-Hungary, Turkey and Bulgaria is to all intents and purposes mistress of Serbia, Belgium, Poland, part of France, part of Italy, Roumania and Russia. The elimination of one country after another gives Germany access to rich deposits of minerals, oils; vast wheat fields; and labor of conquered areas, through deportations; her several million prisoners of war, who are trained men; 150 divisions of her soldiers from the Eastern front, to use as she pleases; the troops she can recruit from the captured Eastern sections, estimated at from 500,000 to several million seasoned fighters, who will be glad to fight for food and drink and money to send home, all of which she can concentrate on the Western front, the Italian front or both, and which so far have been defended admirably by the Allies.

Can Germany break through, take Paris and then attack England? The foremost military expert in this country states that the result on the Western front is a military stalemate; that it has been demonstrated that no frontal attack by either side against the other, can break through, nor can the long thin line be turned, with Switzerland at one end and Holland at the other.

Supposing however, that Holland or Switzerland or both, because of economic necessity or other reasons, are forced to join with the Central Powers? Is this an impossible outcome? Not if one interprets correctly the statement recently made by Sir Auckland Geddes, Minister of National Service, in which he said that the disposition of the German Armies on the British front was most remarkable. He further said:

"They have placed mass upon mass and Germany's military object will be to strike at England. I have no doubt that Germany will strike not only at our forces in France, but also if she can, at the heart of England.

Men in enormous numbers are needed, including men up to 50, to join for home defense."

Nor is he alone in this concern, as is evidenced by the statement of Maj. General Sir C. F. N. Macready, Adj.-General of the British Army, who said:

> "Every man that can be spared from the industries is badly needed. Every woman that comes forward helps her country by releasing a man. We appeal to them to answer the call."

Can Germany be beaten economically? Not according to Ex-Ambassador Gerard, who knows the situation from four years of first hand study, and who said:

> "There is no chance of starving Germany and there is no chance of winning through a revolution in that country; Germany can feed all except her old people, whom she leaves to die; before they would starve themselves, they would starve 10,000,000 Poles, 5,000,000 Frenchmen, 2,000,000 Belgians and 2,000,000 prisoners of war; the only peace she would adhere to would be a peace that really gave her the Victory."

**Mind you, he said this before the capitulation of Roumania and Russia, which places the Central Powers in a much stronger position than ever.**

As a result, the Kaiser now defiantly shouts, "We want peace and shall seek it, but the victory of German arms must first be recognized."

Even if Germany gives up her captured territory, Pan-Germany will be an established fact (Germany, Austria-Hungary, Turkey and Bulgaria) with a population of 150,000,000, capable of maintaining an army of 30,000,000.

Truly not a pretty picture when we see, after nearly four years of war, a successful conquest on the one side and a successful defense on the other.

### German Strategy

What is the reason for the above condition? Military Preparedness? Yes, to some extent, but not altogether. Germany planned for a short war, you will remember, but as the saying is, "got left" and had to plan all over again and build a new machine. She had other weapons which she had been using for years.

The Allies, as they were for three years, were in a much better position from the standpoint of materials, men, money, command of the sea and ships. Practically all the inventions now used in warfare were of American, French or English origin. This country, as a neutral, was a gigantic storehouse for the Allies.

What accounts for the successful conquest of Serbia, Roumania, Russia and part of Italy while Germany was holding that Western front? German strategy, nothing more nor less, a fact admitted by Lloyd-George, who in a speech on November 12th last, said that after three years of war the Entente had no plan of strategy.

I wish every one here could read that admirable and illuminating article "Political Strategy" by Andre Cheredame in the March issue of "The Atlantic Monthly," as he says:





> "As a matter of fact, this war not only is not solely a military and naval war, it is in addition a geographical war, an ethnographical war, an economic war, a war of national psychology. To define its endlessly complex character by a brief phrase which includes all these factors, we may say that it is a war of **political sciences."**

He points out how the invasion of Roumania had been planned by the staff in Berlin, with the aid of a practical application of political science; how it was known that a system of spying had been organized in the Roumanian Dobrudja, by Germans who alleged archæological explorations as a pretext for their travels, and thus acquired valuable information as to the swampy ground, which enabled them to have small bridges and movable floors all in readiness for the conquest; how side by side with geographical study with the ethnographical research, which made it possible to effect a general uprising of Bulgarians and Turks in Roumania against the Roumanians; how from an economic standpoint, merchants, experts in cattle and cereals and specialists in political economy, assembled behind the German lines, to consolidate the gains and exploit the country, after the invasion; how national psychology was responsible for breaking down the resistance, or morale of the people; how on a much vaster scale, these same factors were at work in the downfall of Russia and of Italy, and as Marcosson says is now being used against Spain.

The conclusion and findings of this remarkable man who studied the terrible strength of Germany for twenty years, are nothing short of uncanny. He states that from the Battle of the Marne, down to the offensive against Italy, a period of 38 months, the whole strategy of Berlin, **based on a plan developed in 1895,** or 23 years ago, was as follows:

> 1. To organize an immovable offensive on the Western front, while pretending now and then to attempt a genuine attack.
>
> 2. To carry out without pause a series of circular offensives against Russia, Serbia and Roumania, in order to seize one after another the territories of those states, which are essential to the constitution of Central Pan-Germany according to the plan of 1895.
>
> 3. To take advantage of these successive offensives on the Eastern fronts, to go to the very vitals of Germany's allies, properly so-called, that is to say, under cover of helping Austria-Hungary, Bulgaria and Turkey to defend themselves against Russia, Serbia and Roumania, to organize those three countries militarily and economically and to the precise degree and in the precise form necessary to bring it about, that even at need, without changing their ancient names and the frontiers of 1914, they should contribute to practical purpose and almost without suspecting it, to the constitution of Central Pan-Germany.

The remarkable thing about it is that this man submits a copy of a map contained in a booklet published in 1895 entitled "Greater Germany and Central Europe about 1950."

The similarity between the map of 1895 and the performance of 1917

is sufficient evidence that there was more to it than just the military aspect. Plan and strategy are responsible. As Cheredame says:

> "Thus on the Eastern front they have stopped on lines laid down beforehand, even when they had before them no Russian troops capable of opposing their further advance. Our map also enables us to declare on the most irrefutable testimony, that the offensive against Italy, which was such a surprise to the Allied Staff, was provided for most definitely in the plan of 1895."

This fact was recorded by Italian aviators, November 22nd, and confirmed by German officer prisoners.

It is further shown that Verdun offensive was really undertaken to offset Allied plans for an offensive through the Balkans. The 1895 map line falls short of Verdun as it falls short of Venice; that Portugal is to be detached from the entente; that Switzerland is to be violated, enabling Germany to seize Marseilles and Toulon, thus cutting France off from the Mediterranean, leaving Germany free to deal with Spain according to plans already laid down and outlined by Isaac F. Marcosson, in the "Saturday Evening Post."

Hellish, isn't it?

### The Shipping Situation

So much for the present military situation and the reasons for it. I dwelt on both at considerable length, in order to drive home to you the seriousness of the situation, in order to show you that Germany, stronger than ever, will take a lot of smashing before she is defeated, in order to indicate that both time and intense effort must be expended before we will win this war.

If all the Allies were at maximum efficiency to-day, it would still take a long time to defeat Germany decisively, for while she is hanging on to that Western front, which experts tell us cannot be broken through, she is consolidating her gains in all captured territories, securing the benefits therefrom and using their resources against the Allies.

As the Allies are not at maximum efficiency, it will take a longer time, estimated as from three to seven years, and the reason the Allies are not at maximum efficiency is SHIPS.

For every ton of shipping built by the Allies and neutrals in 1917, the submarines sank 2.45 tons. During 1917, the submarines accounted for 6,623,623 tons. Great Britain and this country built 2,703,275 tons.

The sinkings so far this year, according to P. W. Wilson, American correspondent of the London Daily News, are equivalent to 3 large ships daily, or 21 per week, of "over 1,600 tons," as the British state it. The average citizen ignores the fact that the phrase "over 1,600 tons" really means about 5,000 tons, consequently the losses as indicated by February and March sinkings of this year are:

| | |
|---|---|
| Weekly | 105,000 tons |
| Monthly | 451,500 tons |
| Yearly | 5,418,000 tons |

Here, however, is the thing to think about. When the British talk of tonnage, they mean gross tons. When we speak of tons, we mean





deadweight tons. In other words, a 5,000-ton ship, as the British talk about it, is a 7,500-ton ship as we express it. Our program was 6,000,000 tons for this year, as you will remember. Mark Sullivan, of "Collier's," predicts that it will be 3,000,000 tons or 2,000,000 tons as the British express sinkings. The President recently expressed his gratitude over the fact that we would produce between 3,000,000 and 4,000,000 tons. Call it 3,500,000 deadweight tons or 2,233,334 gross tons. If Great Britain turns out its normal tonnage (it produced 1,181,497 tons in 1917) it will mean 3,514,808 gross tons between us. This means that during 1918, if the Germans keep up **their present sinkings, for each ton built 1.54 tons will be sunk, or 1.93 to one as the average for 1917-1918.**

The Allies are sinking or destroying 23 submarines per week; the Germans are building 38 per month. This is at the rate of 1.65 to one.

Consider this also. It takes four to ten tons of shipping to transport and maintain one soldier abroad. The average is seven tons. To transport and maintain the army, Senator McCumber stated we would need abroad 7,000,000—would require 49,000,000 tons of shipping. **All the Allied and neutral shipping afloat is 42,000,000 tons, with the submarines slowly eating into this amount.** To even transport and maintain an army of 2,500,000 men, and we won't do our share with less—would call for 17,500,000 tons of shipping, or 40 per cent of all the shipping available. **And shipping is being destroyed twice as fast as it is being built.**

If we cannot maintain a big army abroad through lack of ships, enormous quantities of aircraft, rifles, locomotives, trucks and automobiles, at the present rate of manufacture, will pile up in our ports, which will bring about industrial disorganization, as we will have to stop making war products, **all of which shows that the key to our successfully waging this war is ships.**

The neck of the bottle is ocean transportation, for we are building war materials five times faster ("Collier's") than we can transport them, and yet we talk of discontinuing non-essential industries. Hamilton Holt, editor of "Independent," visited 14 shipyards from Philadephia to New Orleans—contracts 260 ships—50 on the shipways. Talked with shipbuilders, Government inspectors and workers, and feels there will be no ships delivered complete to the Government for the next six months.

If we can't get ships, and the above clearly indicates this—unless we double or triple our ship construction and we are undertaking a tremendous task as it is—it means but one thing for all of us to look squarely in the face—wait until we can get ships enough to put over the real American punch—wait, while Germany gets stronger, making it more difficult for the Allies to decisively beat her.

We are going to get the ships, and they will be built faster than they are sunk, and when we have them we will put an army and supplies into Europe which with the Allies will put over the knockout. But not until every man and every woman, every boy and every girl, every grandma and every grandpa, have done, not only their bit, but their utmost to win the war.

So you see that from the standpoint of the present military stiuation.

the superior political strategy of the Germans, and the lack of shipping, a long and bitter war is ahead of us, requiring millions of men in the field.

Let me give you an idea of the size of the direct and indirect army needed to wage this war victoriously.

We are told that the plan is ultimately to have 5,000,000 soldiers abroad. It is estimated that it takes 6½ persons, on farms, in mines, on railroads, in ships and in factories to maintain a soldier. This, then, means an army of 37,500,000 persons.

Statistics show that there are:

| | |
|---|---|
| 45,000,000 | between ages 18 and 45 |
| 4,500,000 | between ages 15 and 20 |
| 6,000,000 | between ages 45 and 60 |
| 55,500,000 | Total available |
| 37,500,000 | needed in war pursuits |
| 18,000,000 | available for regular activities |

As I see it, the above answers our question as regards whether we will need women in industry or not. We will need them in increasing numbers before Berlin capitulates.

The war can only end in one of three ways:

A—Lose
B—Draw
C—Win

If we lose, the women need not concern themselves about going into industry—**the Germans will see to that.** If the result is a draw, we can prepare our boys and girls for the supreme struggle in about 25 years. If we win, it will be when the 100,000,000 of us get behind the war as one man.

The President said to the farmers:

"The culminating crisis of the struggle has come, the achievements of this year on the one side or the other must determine the issue."

May the Almighty help us if this is so, in view of the points brought out in the foregoing. May we awake to the seriousness of the thing, kill off forever this mad dog of Europe, and destroy this poison which would set the world back one hundred years.

**There must be no draw.** We cannot lose, if posterity **means anything at all to us. WE MUST WIN.**

How long will it take? Colonel Sir Berkeley Moynihan, C. B. Senior Consulting Surgeon of the Royal Army Medical Corps of the British Army, said November 8th last, before 1,500 physicians and their wives at the Waldorf-Astoria in New York:

"I am asked how long the war will last. I will say for America that the war will have just begun, when every man of military age shall have offered his life to his country; when your wealth, your souls, and your honor have been offered, when you have mourned your dead by the hundreds of thousands."





When will it end? Let young Jimmy Gerson ("Over Here" by Earl Derr Biggers in "Collier's") tell us:

"I'll tell them when it will end—it will end when the men who trampled down Belgium and France, who murdered people like cattle, who ruined the fruit trees and burned their homes, it will end when those men feel the grip of the world at their throats. It will end when the crowd who started this war of lust and loot are in full retreat, when Willie down at Verdun is shouting to papa at Berlin: 'Come, for God's sake!' and papa at Berlin is screaming to Willie at Verdun: 'Run, for God's sake!' It will end with the siege of the Rhine!

"That's when it will end if it's left to us fellows who are going over. We're ready to stand in ice water up to our waists, to live with rats in a rain of German shells, to go over the top and be finished. Nobody need worry about our boys over there. But how about the bunch left over here—the crowd that want to know how soon it will end? Are they going to queer us? Will they fall for the German tricks? Will the pacifists turn their blood to water? Only one thing can do for us and that isn't the German army. It's our own people at home. Maybe some guy in Terre Haute will get tired putting three-cent stamps on his letters. Maybe some fellow in Cleveland will get sick of the graham bread. Maybe some fat little soul in Denver will get to worrying about his profits. And they'll come together and decide that it's no use fighting it to a finish—and where will we be? Done for, licked, finished; thousands of dead for nothing —all because the people at home hadn't the guts to stick it out!"

In other words, this war will be won when all have given their time, their money, and if necessary their lives to the cause. Multiply all the latent ability and resources of each person by 100,000,000 and what will we have? The Kaiser in exile. If we don't, he may decide to move his capital to Washington.

## II

Are Women Needed in Industry Now?

We will need women in industry, of that there can be no qusetion. Do we need them now? My study does not indicate this, but it does indicate conclusively, that later on we are going to need them in increasing numbers, and that now is the time to prepare and develop plans and policies, so that when we begin to properly utilize their abilities, we will be able to proceed along logical, fair and well-planned lines.

The reason that we do not need women in industry now is, simply because we are not using our man power to the extent possible, nor as efficiently as we can. In this connection, the following letter will prove interesting:

Dear Mr. Knoeppel:

This afternoon on the Century I have read and reread your wonderful article, "American Industry Needs Women," in the December issue of "100 Per Cent."

And reading, I have reflected.

At lunch to-day, a man checked my hat, another served my food, another man removed the dishes—and still another brought my cigar.

**Yet we pretend we are organized for war.**

After lunch a man shaved me and another man shined my shoes—while I read a paper sold me by a man who might have been, should have been, SHOULD BE at war. A man carried my bag to the sidewalk, another man opened the door of a man-driven taxi to take me to my train. A man opened the taxi and another man grabbed my bag; a man sold me my ticket and another man examined it. On the train TWO men took up the ticket, and a polite young man, who might be, SHOULD BE fighting, is typing this outburst to you.

**Yet we pretend we are organized for war.**

Shatter the pretense if you can and will. Shatter it, some one MUST—or we never can win the war.

As I am beginning to see it, Mr. Knoeppel, the fate of the nation, indeed the fate of all the world, hangs on the seventeen men who served me to-day; these seventeen, and seventeen hundred, seventeen thousand, seventeen million others like them.

These men must give way. They must be displaced or replaced. And those who are replaced must be, and will be replaced by Women.

Men who are able and who have no dependents must FIGHT. Those of us who are less able or who have dependents must feed and clothe the fighters; and we must permit and encourage and HELP the women of the land to take up the tasks which they are anxious and ready to undertake, and for most of which they are eminently fitted.

Yours very truly,

(Signed) R. C. WADSWORTH.

Let us discuss this question of man power for a moment. In our jails are men who under guard could be put to work, either in industrial or agricultural pursuits. Elderly men who have retired, unless physically unable, could perform work of a lighter character in shops and offices. There is still in this country a greater degree of unemployment than is necessary and men who have nothing to do should be put to work. Tramps, street loafers and lounge lizards should be rounded up and put at productive occupations. Children from 12 to 16, both boys and girls, could be given something to do for part of their time each day. Workmen who take time off, because of high earnings, should be appealed to and kept busy, even if we have to resort to penalizing them for failure to report to work. Shifting of workers can be eliminated through joint action by the labor unions, manufacturers' associations and the Government. Men in clerical positions in office and shops, male waiters and elevator tenders, in hotels and clubs, pullman porters and conductors, taxi drivers and porters at the depots, and thousands of men in all walks of life whose work is not of a hard physical variety could be utilized to advantage in the army, in shops and on farms. We could take the cripples and the blind and teach





them to be helpful—we have got to do it after the war—why not now? Then also there are several million of male and female enemy aliens who could be placed at some form of work, under guards. We can also arrange for a carefully worked out and properly executed plan of labor dilution, wherein a portion of the force in an efficient shop would be placed at the disposal of a less efficient plant. This by no means exhausts the list of places where men could be found, whose places or most of them, could be filled by women.

In short, my claim is that we should first use the women in the lighter occupations in order to utilize our man power properly and avoid exploiting women, or putting them at industrial work, before industry is ready for them, and my analysis indicates that industry is not ready for them as yet. By ready, I mean providing safeguards, proper training, careful selection and the like.

This leads me to the conclusion, that we need a policy, a plan of action, with the Government behind it, and organized labor and the manufacturers of the country co-operating to the fullest. Mere argument and logical reasoning will not bring this about, but the experience of Great Britain with reference to women in industry may be instrumental in focusing our attention on the methods to pursue in going about this task.

## III

## The Experience of Great Britain

That it takes 6½ persons in shops, on farms, in mines and on railroads to maintain a soldier is sufficient evidence that military success depends entirely upon industrial success, and that unless there is industrial efficiency of the highest order in this war, our part in its winning will be both weak and ineffective.

As yet we have not struck our stride industrially. A great deal remains to be done to get both capital and labor to cooperate, not only with each other, but both with the Government.

The greatest sacrifices that will be made in this war will be on the part of labor. Not only will the great army at the front be drafted mostly from the ranks of labor, but the labor that mans the factories at home and supplies the products of war will be called on for sacrifice. Will it not require sacrifice on the part of labor to see their places taken by women, with the possibility that the pay for the work may be reduced on this account? Will it not require sacrifice to work at night, so that the women can work on the day shifts, and in some cases to work longer hours because, due to the shortage of labor, it will be necessary, in order to keep the boys at the front supplied with munitions? Labor will be called on for sacrifices, and labor will make them willingly for its country's cause, but labor will not have sacrifices imposed on it by others.

We can well consider the lesson that England was forced to learn. When the war started, plans were made for the making of the necessary munitions with the depleted working force, by using the labor of women and by longer hours, overtime work, and by speeding up production which had previously been strictly limited by the rules of the powerful

English labor unions. When the plans were completed and all that remained was to tell labor what it had to do, what was the surprise and consternation caused when labor squashed all the nice plans, by simply sitting down and refusing to work under the conditions imposed. There was much talk on the lack of patriotism on the part of labor, though thousands of those who have laid down their lives for England were drawn from its ranks. Then the idea finally seeped in, that it would be very necessary to ask labor what it was willing to do, what it would please do, before making any more plans.

The seriousness of the situation is vividly shown by the speech of Lloyd-George to the British workmen on December 25, 1915, in which he said:

> "Either we must tell the soldiers that we are sorry that we cannot get the guns to enable them to win throughout 1916, owing to the trade-union regulations, or we must tell them that if they manage to hold out for another year perhaps American workmen will help us to get sufficient supply for 1917. I cannot return to Parliament and report through the House of Commons to the British Army that skilled workmen won't suspend their rules to save their fellow countrymen's lives on the battlefield."

The press of the world was quick to condemn the attitude of the British workmen, but while there was little that was commendable in their action, still it is probable that their attitude was largely due to the methods which were used in dealing with them, and which made them feel that the heaviest sacrifice of the war was being imposed upon them by those whose burden was light, without taking into consideration at all labor's own feelings in the matter. This conclusion is justified by the later action of labor, after it had been taken into the councils of the government, in which the workers made what was for them the supreme sacrifice for the cause of their country, in placing all their hard-earned rights, privileges and restrictions on output on the altar of the War God, and enabled the employers to dilute labor, to use women, install automatic machinery, that the men at the front might have shells, ammunition and other things needed in war.

How did England bring this about? It's a story in itself, but I will let Miss Frances A. Kellor place a concise description before you, as taken from her address, "Industrial Americanization."

"Let us go for a moment to England, and see what she has built, and what an inspiring thing it is in its vision and power and justice and comprehension.

"First of all she defined munitions work to cover the manufacture and repair of everything intended, adapted or suitable for use in war, including even housing of workmen. The result is that she has little difficulty to-day defining non-essential and essential industries.

"A next important step was the suspension of trade customs; it is provided that any rule, practice or custom, which has not the sanction of the law, which tends to restrict production or employment is suspended,





whether it is a general trade practice, a custom or a local shop rule. If there is controversy it goes to arbitration. Even matters of contract are included. This means any man can work at any job, skilled or unskilled, that women can be employed and all shops are open shops.

"At the same time unions were protected. It is also provided that any departure during the war from any practice prevailing prior to the war shall be only for the period of war; that preference shall be given after the war to those employed prior to the war, that time and piece rates shall be maintained, that a record of departure from practices shall be kept.

"A very important action was the establishment of controlled industries. The minister of munitions has power to declare any establishment or part thereof adapted for use in war or suitable for war uses a controlled industry. In every such establishment the government takes all excess profits which are the net profits as they exceed by one-fifth the standard profits, which is the average for the two years preceding the war. If this is not satisfactory a separate agreement may be reached.

"At the same time wages were limited in such establishments and when an employee changes from one to another where the rate is lower he is given a bonus to cover the difference. Where he is away from home he is often allowed a sum for living and is given a reduced fare to go home holidays and week-ends. Workmen dismissed with less than a week's notice may receive compensation. Workmen idle for a period of more than two days when they have had no opportunity in the establishment to earn wages may receive compensation.

"If workmen will agree to stay in such a controlled establishment for six months they are designated as munitions volunteers and get the standard rate of wages, and certain insignia of honor. They may be, however, penalized for violation.

"Employers are prohibtied from soliciting by advertising or from inducing workmen in other industries to leave their work. As the certificate of leaving has been abolished there is no need to discuss it here.

"There are boards that handle the dilution of labor for each industry and the mixing of skilled and unskilled workers and of women is carefully done, the prevailing rates for the job being protected.

"Strikes and lockouts have been made practically impossible. All such controversies go to the Trade Board. If it fails to deal with them, they go to the arbitration boards. The law not only deals with all concerted action involving a stoppage of work, but it reaches the instigator of a strike by penalizing any person who attempts to impede, delay, or restrict production, repair or transport of war material or any other work necessary, for the successful prosecution of the war. The award of the Arbitration Board is final.

"Certain specified industries are protected in calling out men for the front.

"A complete system of labor exchanges (nearly 400) is in operation. Each one has a board which deals with the problems as they arise and acting in an advisory capacity. There are no competing private agencies,

and local boards are well informed of local needs and these exchanges control the field.

"With the building of this structure, England has found time to make studies of fatigue, to protect women, to put government agents in plants to look after the conservation of man power, to have billeting committees to find lodging for workers, to conduct industrial canteens and to do countless other things for workers."

What has been the result? An industrial efficiency in Great Britain undreamed of by the most radical efficiency crank and which has been one of the most important factors in enabling that nation to play such an important part in the conduct of the war so far. Great Britain has out-Germaned German efficiency.

Let us consider for a few moments some of the experiences out of the English books, specially with reference to women labor. In a country having less than 50,000,000 population, there are, according to Helen Fraser

1,250,000 women in industry replacing men
1,000,000 women in munitions making
80,000 women in government departments
250,000 women on farms
10,000 women per month joining the Women's Army Auxiliary Corps
60,600 women in volunteer Red Cross Work.

It takes from 6 to 8 weeks to make the average English woman fit for the simpler operations on shells, shell parts and fuses, while the more intelligent in this line becomes lathe hands and tool setters. The British Government has established 50 training schools since the war and thousands of women are being schooled in industrial activities. In addition most of the large plants have training classes of their own.

The great Gwynnes, Ltd., works employ a large number of women and in describing what they do in the manufacture of aeroplanes, I. William Chubb, in "American Machinist," says:

"In certain factories there are about 1,800 employees, of whom 700 are women. The women enter and leave at the same time as the men, a one-break day being worked, with a quarter of an hour rest in each shift, giving an opportunity in the afternoon for the tea interval which has generally been found so valuable in connection with the employment of women in England. As to pay, the piece rates for men and women are alike, and put generally, the women are not segregated, but take their places in the shops beside the men and are permitted to undertake any operation for which they are found capable. As timekeepers they are at least equal to the males. Rest rooms are of course provided, and, somewhat unusually, the men and women use the same eating-rooms.

"The works are run strictly according to a planning system, and progress girls are employed in the shops. At one works the stores are kept successfully and completely by women; they even become head storekeepers.





"In erecting, stripping down and re-erecting the engines a woman is in each gang, the proportion in the erecting shop being one woman to two men. In the carburizing section the plating is done by women, but here a man is in charge. Similarly in the heat-treatment department, while a man is in charge, women are employed on the smaller pieces for such work as re-heating, plunging, etc. Women, too, are engaged for inspection purposes.

"For machining and other operations the women are actually trained in the shops, standing by and watching the operation of machines, etc. This is preferred to the instruction of women in schools, even when the school is in the works, as the women thus quickly become accustomed to the general shop atmosphere and conditions; and in particular they are found to appreciate more readily the value and need for care in the use of precision tools, gauges, etc., an advantage which the semi-skilled laborer often lacks. As is fairly common, the women are found quick in learning one particular operation, perhaps more so than men; but they do not change readily from one operation to another. In short, it is not usually found cmomercially expedient to attempt to shift them.

"Setting up is commonly done by men, with few exceptions. The factory is run almost throughout with single-operation machines, even the ordinary lathe being so used. The product of the automatic has not been found sufficiently accurate to pass the official inspection."

In England women are receiving honors for deeds of their own—as, for instance:

Martha Branhall—For courage in remaining continuously at a very dangerous task, in spite of the occurrence of several explosions.

Edna Goodenough—For continuing to work after suffering serious injuries from an explosion resulting in the loss of the right eye.

Nora Morphet—For courage and high example in continuously working long hours in a poisonous atmosphere, which habitually affected her health.

Agnes Mary Peters—For great courage and high example in continuing to do work of an exceptionally dangerous nature, which finally resulted in an accident by which she was made totally blind and otherwise injured.

It is said that King Edward and Queen Mary once made a tour of the munition factories, and in one of the danger zones the King asked a girl whose face was seamed with scars if she had had an accident. She replied that she had been blown up three times. The King told her that she was a plucky girl and her reply was that she had a brother "over there."

As regards the ability of the women workers, note the following from the New York "Sun" of March 9th:

"British women have clearly demonstrated their superiority over men in the manufacture of gun shells. Sixty-one per cent of all the shell makers in Great Britain are women and this dilution of labor is continuing rapidly, it was stated officially here to-day. It is found that the greater the percentage of women the greater the output.

"The forthcoming monthly bulletin of the Bureau of Labor Statistics

shows that in a ten-hour day women are able to turn out twenty-four nine-inch shells, whereas ten or eleven is the average for men."

In England it was found that a great deal of the work in connection with the army behind the men at the front, was carried on by men, such as keeping books, clerical work, developing and printing photographs, telephone work, telegraphing, sorting mail, forwarding packages and many other civilian tasks which an army has to carry on.

The English organized a Women's League for National Service, asking that the Government turn over to them some of the civilian work at that time performed by soldiers.

To-day there are thousands of women cooking for the men in the army camps.

All over France you find women dressed in khaki and soft hats, wearing the insignia "W. A. A. C. Q." for the Women's Army Auxiliary Corps, the "Waacs" as they are called and the work of this wonderful organization, now a part of the War Office and a branch of the army, rivals that of the Red Cross.

Rhetta Childe Dorr, writing in the New York "Evening Mail" of this organization, said: "The first day I visited Devonshire House, the draft for France, which I was assured was average, called for—

29 clerks
10 cooks
10 waitresses
1 motor car driver
2 telegraph operators.

"All were promptly supplied, as a matter of course, and a few hours later the women, saluting smartly, left for France, packs on backs, exactly like soldiers. This remarkable organization was recruited by the Government at the rate of 10,000 a month, the plan being to mobilize 250,000 women to release the men for fighting.

"It is expected that when the Women's Army Auxiliary Corps is recruited to full strength it will have released more than ten army divisions for the actual work of fighting. Women are wanted as printers, binders and folders in military print shops; as grooms and assistants in military veterinary stations; as gardeners, shoemakers, packers, checkers, messengers, sewers, bakers, and as forewomen for all sorts of workers. Women are even doing acetylene welding, think of it, you men who know what welding is."

In Appendix B you will find a list of the work being done by women in the various British Industries, while in Appendix D you will have an opportunity to review the steps taken to protect and safeguard labor that it might operate at maximum efficiency, I can promise you reading both profitable and interesting.

## IV

## Our Experience to Date

My studies of the labor situation indicate:

1. That we are passing through the same experience that Great Britain passed through during the first year of the war.





2. That we have no well-defined plan or program with reference to either male or female labor.

3. That there has not been the proper three-sided co-operation between employer, employee and the Government.

We have had strikes, "Collier's" stating that 64 typical strikes meant a loss of 1,795,900 working days, equivalent to an army of 60,000 men on strike for 30 days.

We still have competition between manufacturers for workers. About this Mr. Hurley of the Shipping Board said:

"We sent two tourist sleeping cars loaded with men for the Western shipyards a short while ago, and we were asked to give them priority to get them out there. And these Eastern shipyards went out there and employed riveters away from those very yards on the Pacific Coast."

We have had to resort to a national campaign of advertising to get shipworkers. We put enemy aliens outside of prescribed zones, without creating any efficient machinery for putting them in productive occupation. We have withdrawn men from industry by the thousands without any real program for replacing them. There are state and city employment bureaus; trade union and manufacturers' association employment bureaus, and in addition, about 5,000 private employment agencies. Employers say they cannot get help and must resort to women labor. Organized labor replies that there is no shortage of labor.

I am not saying the above in a spirit of criticism. In the hard work we have put in this investigation we have had but one thing in mind—*constructiveness*. It is well to know the true situation, however, that we may fully appreciate the problems confronting us and effect a solution. This we must do if we are to win the war, and the winning of the war is not a debatable subject.

The Council of National Defense has a Woman's Committee, of which Dr. Anna Howard Shaw is Chairman. Under this Committee is a "Department of Women in Industry," of which Mrs. James A. Field is Executive Chairman. The Department of Labor has a Woman's Division of which Hilda Muhlhauser Richards is Chief. The Ordnance Department has a Woman's Division of which Mary Van Kleeck is in charge. Secretary of Labor recently appointed an Advisory Council made up of representatives of both capital and labor, with Agnes Nestor of Chicago as the representative of women.

Let us consider for a moment what these various bodies are to do. In a letter we received dated March 9th, Mrs. James A. Field, Executive Chairman of the "Department of Women in Industry," of the Council of National Defense, says:

"The work of the Woman's Committee in reference to women in industry is centered in their Department of Women in Industry. The aim of the Woman's Committee in all its work is to co-ordinate the activities of the women of the country and serve as a channel of communication between them and the Government. The Department of Women in Industry tries to accomplish this in its particular field through State Departments of Women in Industry which have been established in every state as part

of the Woman's Committee of each state. These departments are headed by women who have had some experience or in some way are especially qualified to handle problems of women in industry with reference to the public and to other organizations of women. Work of the departments has so far confined itself mainly to assisting in the maintenance of standards for working women; to informing the public what standards should be; and in some instances to making surveys or investigations of women's work. This latter function we expect now will be largely taken over by the Women in Industry Service which is to be established in the new War Labor Administration. There will, however, still be much that the state departments can do—especially in the field of maintaining standards."

The Women's Division of the Department of Labor is to cover the following, as outlined by Secretary of Labor Wilson.

"1. A means of furnishing an adequate and stable supply of labor to war industries.

2. Machinery which will provide for the immediate and equitable adjustment of disputes in accordance with principles to be agreed upon between labor and capital and without stoppage of work.

3. Machinery for safeguarding conditions of labor in the production of war essentials.

4. Machinery for safeguarding conditions of living.

5. Fact-gathering body to assemble and present data for effective executive action.

6. Information and education division to develop sound public sentiment and exchange of information between departments of labor administration."

The work of the Woman's Division of the Ordnance Department is best expressed by Mary Van Kleeck, in the New York "Post," as follows:

"The Women's Division of the Ordnance Department is an integral part of the Industrial Service Section, guided by the same policies, and working with and through the other divisions. It will have its specialists in employment management, in housing as it affects women workers, and in adjustments, and these will work with the corresponding divisions of the Industrial Service Section. It will have an important branch on the health of women workers. Its field work will be handled through district supervisors assigned to the large munitions areas where women are employed. These supervisors will be stationed in the local offices of the production division of the Ordnance Department."

The work to be covered by the War Labor Administration of which Agnes Nestor represents women is:

"1. A means of furnishing an adequate and stable supply of labor to war industries to include:

(a) A satisfactory system of labor exchanges.

(b) A satisfactory method and administration of training of workers.

(c) An agency for determining priorities of labor demand.

(d) Agencies for dilution of skilled labor as and when needed.

2. Machinery which will provide for the immediate and equitable adjustment of disputes in accordance with principles to be agreed upon





between labor and capital and without stoppage of work. Such machinery would deal with demands concerning wages, hours, shop conditions, etc.

3. Machinery for safeguarding conditions of labor in the production of war essentials. This is to include industrial hygiene, safety, women and child labor, etc.

4. Machinery for safeguarding conditions of living, including housing, transportation, etc.

5. A fact-gathering body to assemble and present data, collected through various existing government agencies or by independent research, to furnish the information necessary for effective action.

6. Information and education division, which has the functions of developing sound public sentiment, securing an exchange of information between departments of labor administration, and promotion in industrial plants of local machinery helpful in carrying out the national labor program."

If this War Labor Administration recently appointed is to be the clearing house for all matters pertaining to labor problems and to women in industry; if it can plan and co-ordinate the work of other sections; if it has authority to get results instead of being another advisory body, I can see great things ahead, as our replies to the questionnaire clearly indicated, that manufacturers were not acting in a concerted manner nor along well planned lines. One manufacturer wrote in and dismissed the entire subject by advising that we import 5,000,000 Chinamen. Needless to say his letter received scant consideration. On the other hand, R. H. Sotherland, of the Mansfield Tire and Rubber Co., Mansfield, Ohio, had this to say:

"Real American men have always placed the women of their country on a pedestal, as examples of refinement and culture, protecting them against the ravages wrought by extraordinary manual labor, which was a part of the original American woman, the squaw of the Great American Indian. Are we going to step back a decade in our boasted civilization and place the women of America on a par with the peasantry of Germany, Austria-Hungary and numerous other foreign countries, in a way that it will develop for the future the heavy ox-eyed beast of burden so common in foreign countries and becoming common on the streets of American cities through our weak immigration laws? Is it not enough to ask the women of America to bear children and suffer the pangs of maternity and rear their offspring to the actualities of life that each one must face and prepare their boys to be real men."

L. H. Colburn, general manager of the Colburn Machine Tool Company, after reading our questionnaire, wrote to "Industrial Management" as follows:

"In the writer's opinion, based on recent experience, the principal difficulty in employing women is the attitude of the labor unions. To illustrate: The Colburn Machine Tool Company has a large and splendidly equipped plant located in a small city where the living conditions are of the best. There is plenty of sunshine, good air, beautiful surroundings such as trees, grass and flower beds, in fact everything to make working

conditions pleasant. We work eight hours a day, pay time-and-one-half for overtime and double time for Sunday work.

"We pay the highest wages to machinists and other labor, but in spite of this we have been greatly handicapped on account of not being able to get sufficient help. We are now and have been "full up" for about three years with important war business.

"We exhausted all our efforts to get additional men; we advertised in the newspapers for hundreds of miles around; we sent employment agents to the large cities, we offered our workmen bonuses for getting additional men—but all to little purpose. Finally, last July we decided to start to employ women in some of the departments of our plant. We had never employed women in the shop before, but made a careful investigation first and went around to plants in other cities where they were employing women successfully and got ideas on the subject.

"We decided that we could use about 50 women on our work, putting them on small machines, light bench work, fitting, etc. We made inquiries and found that we could get all the women we wanted, in fact, they welcomed the idea because, for one thing, we resolved from the start that we would pay them just as much as we paid men for the same work.

"About that time we commenced to hear rumors of objections on the part of our men employees belonging to the machinists' union, and finally we were notified that a committee representing them wanted to see us. We received the committee and found that they were unalterably opposed to our employing women in the shop in any capacity. They were afraid that the women if once admitted would, after the war, keep the places which they claimed rightfully belonged to men. No amount of arguing would change them in their stand.

"Rather than have any trouble we gave up the idea of employing women for the present."

Frank Morrison, Secretary of the American Federation of Labor, does not believe that there is a shortage of labor. In a letter to me he said:

"Your very first question 'How are we going to find the immense army of women needed' opens up a wide field for discussion that could not be answered in a few words. In what field are women needed? Should they be placed on street cars, lumber mills, machine shops and on the railroads?

"This question might also convey the impression that there is a labor shortage, which is agreed to by labor conscriptionists, women exploiters and advocates of Oriental labor. The trade union movement dissents from this assumption and insists that labor mobilization will remedy a condition that is charged as 'a shortage of labor.'"

Peter J. Brady, President, New York State Allied Printing Trades Council, in an article, "Women's War Work and Men," which appeared in the New York "Evening Post," has this to say:

"There has been much publicity during the past few months to the effect that owing to the requirements of men for the war there is a scarcity of labor, and therefore women are urged to fill these vacancies. This is an absolute falsehood, brazenly stated with deliberate intention to deceive the public and defraud the unfortunate women. There are probably more





people out of employment now than at any time during the past two years."

In a letter to organized labor under date of January 1st, Samuel Gompers says:

"War means victory for our cause or danger to the very existence of our nation. With our nation at stake, individuals cannot interpose objections to the war—a war declared by the will of the nation's representatives." To this everyone will heartily subscribe. But further on in his letter he says:

"While this is true, there is even more than ordinary need for the maintenance of the rights of men and women, and for careful scrutiny and the fullest discussion of policies and methods before their adoption.

"The time for labor to interpose its needs and contentions is while policies are in the making."

To this we only partially subscribe. I agree fully with President Wilson and Secretary Baker, that we must protect and safeguard our workers, especially our women and children. I go on record by saying that we do not need women in industry now, if present man power can be made more efficient and we can recruit men from the lighter occupations. I go on record by also saying that in all discussions of plans and policies governing labor during war times, labor should be represented.

But this is no time for a debate of labor rights or the rights of capital, nor is it a time for a discussion of your rights or my rights. The question squarely before the country, which we—100,000,000 of us—must answer NOW is—**will we be free people or a vassal people?** If I have an aching tooth and a blood poisoned arm to the shoulder, no discussion is necessary as regards what to do first. I want to see labor have a greater industrial liberty, more say in the conduct of business and greater earnings than ever before, but first I want to see this war won, **and not by Germany**, in which event the rights of all of us would be taken care of by that philosophy called **German Kultur.**

There have, of course, been abuses of the opportunity to utilize women labor, as indicated by the following statement by Miss Pauline Goldmark concerning an investigation she made of a factory in Zanesville, Ohio:

"The majority of women at this plant are engaged at hard labor such as loading scrap iron, sorting scrap iron, wheeling iron castings in wheelbarrows, etc. The women loading scrap, and sorting the same, work out in the yards, with no protection from the intense rays of the sun or weather. These women wear overalls and large brim hats. They hand the iron up from the ground to others in the cars, who pile it. The hours are nine hours a day, fifty-four hours a week, and one-half hour for luncheon, wages 20 cents an hour and $1.50 deducted each month for relief purposes. Men are given 21 cents an hour for labor of the same class."

A woman conductor in the car lines in New York City has this to say regarding her experiences:

"As to what the work is like. It's no work for any girl. It's a man's job. I don't mean because of the actual work. It's the conditions, the life, the hours, and the days. To be exact, I work from one o'clock in the afternon until 3:35, and from 7:19 in the evening until 2:29 in the morning.

This doesn't sound bad, but what really happens is this: I get up at 11 o'clock in the morning and have breakfast. I say, 'Goodbye m'm, see you 16 hours later!' Then I may work until 3:30 o'clock, but more likely, like tonight, I will work until nearly six with no more food. You must work overtime or be suspended. A girl was suspended yesterday because she has two children and had to be home; she refused to work two hours overtime.

"What time I have before 7:19, when I go on again, I stay at the barn in the rest-room, sewing or knitting. I get dinner there for 25 cents. You can imagine what the dinner is like for that, but we don't like to go out in our uniforms, so we just eat it there. The rest-room is no fit place to spend your free time, not a clean place,—basins, toilets, garbage cans—a few benches. But what else can you do? You can't make an engagement, for you never know when you will have to do overtime. Only yesterday I hung around four hours between my regular runs and refused to go out with a girl. When I reported I was told I had no motorman and to go home. Of course, I was not paid for the time I lost. Then today I made a date, and had to work overtime."

A labor paper, "The American Federationalist," is much concerned over the possibility of an uncontrolled use of women labor. It says:

"In Cleveland between 75 and 100 women are running Bradley hammers in one shop. Women are wiping engines in the round house at Akron, Ohio; many are running engines in the machine shop and doing other laborious work around large manufacturing plants. One woman has been employed by the Baltimore & Ohio railroad as a shop hand; she packs journal boxes, which are on the axles of wheels and must be filled with waste and oil. Flag women have appeared on railroads. Women are employed in the foundry trade, in machine shops and munition plants. One lumber-yard in Chicago is reported to be employing women to handle lumber. Truly there can be no justification for employing women with so little discrimination. We cannot disguise the fact that during the progress of the war women may be employed in constantly increasing numbers, but surely our nation has enough intelligence to see that women are not employed in handling Bradley hammers and doing the roughest sort of manual labor for which they are physically unfit."

On the other hand there are some bright examples of the successful use of women labor as will be found in the experiences contained in Appendix E. These, however, are more or less isolated cases and the propositions were worked out by the concerns themselves rather than being the result of a comprehensive labor program.

It was because we felt that women labor in industry was not needed now; it was because of conditions such as above described; it was because we do have both radical labor leaders and autocratic manufacturers; it was because some plan and policy should be developed, that we decided to make this survey that we might assist in a small way in the proper utilization of both man power and our woman power.





## V

### Report Covering Analysis of Questionnaire

With a long war confronting us, calling for our utmost efforts to win it, it is apparent that we will have to call upon women in increasing numbers. It is further evident as one studies the subject, that we do not need women in industry to any great extent, at this time, but **what we do is a plan for properly handling the proposition, when the need for women in industrial plants becomes pressing.**

In other words, we must first use our man power to the fullest and as efficiently as possible; then take men from the lighter occupations, substituting women, and then call upon the women for industrial work, during all of which time we should be so shaping things, that women may be able to work to best advantage when the call comes.

One principle which should be given consideration in the matter of using women is as follows:

**Most of the women who will go into industry are the future mothers of the race and the wives of our sons and must not be exploited.**

Another which must be adhered to in safeguarding our women is:

**There must be no charity about what is done nor must the attitude towards them be one of patronizing.**

With these in mind, we can proceed to the matter of our questionnaire. As you may recall, the questions which first appeared in "100 Per Cent" for December last, were as follows:

1. How are we going to find the immense army of women needed?
2. What basis shall we use for selecting women for industrial work?
3. What efforts shall we make to provide clean, wholesome living conditions?
4. What changes will we have to make to provide proper working conditions?
5. What social conditions will we have to provide?
6. What hours should women work and how about rest periods, fatigue and the like?
7. How will we arrange to subdivide and arrange the operations so that women can efficiently perform them?
8. How will we train women and who will do it?
9. What steps will be necessary to induce the full co-operation of
   a—labor unions?
   b—organizations of women?
   c—our government?
10. What steps should be taken to change and unify the state laws with reference to woman labor?
11. How shall we adjust and arrange the wages of women?
12. What will we do with reference to woman labor after the war?

In other words, these questions had to do with location, selection and training of women; conditions—working, living and social; the work to

be done by women; hours, fatigue and wages; existing laws; co-operation of the labor unions, women's organizations and the government and the Post-Bellum factor, all of which are essential considerations in any intelligent presentation of the subject.

The questionnaire attracted no little attention and we understand that it will be a subject for discussion at the next meeting of the Industrial Betterment Committee of the National Association of Manufacturers. A great many requests have already been made for the conclusions, including government officials interested in the subject.

Th answers were both a revelation and a disappointment. A revelation, in that the general trend was altruistic, big-minded, clean and thoroughly American, and showing conclusively that **organized labor has nothing to fear from the manufacturing world on this question of women in industry.** A disappointment, in that there was evidence of lack of plan, no co-ordinated action and lack of co-operation, so necessary in the successful use of women in our factories.

To place the results of this investigation before you in the most logical order, it was decided to rearrange the subjects as follows:

A—The Work to be Performed by Women.
B—Find the Women.
C—Selection of Women.
D—Training Women.
E—Wages, Hours and Fatigue.
F—Working Conditions.
G—Living and Social Conditions.
H—State Laws.
I—Co-operation of—
  1—Labor Unions.
  2—Women's Organizations.
  3—Government.
J—Post-Bellum Consideration.

Let us now consider each in their order—

### A—The Work to be Performed by Women

It was clearly evident from the answers received that manufacturers had no well-defined views as regards what work women should be called upon to do, nor where they would put them if necessity forced them to employ women. It was apparent, however, that this was the first point of attack, for how could we look for a person to do something which had not been defined or outlined as a task to be performed? We could not say—"here is a job, let's find a woman to do it."

A study of the answers did disclose, however, the essentials to consider, which, if placed together and co-ordinated would furnish a plan of action.

As regards work to be done by women, a few felt that it would be unnecessary to subdivide operations, first, because women had proven themselves more efficient than men, and second, because proper training





and supervision would be all that would be necessary to secure productiveness from women.

The consensus of opinion, however, was that work should be studied with the view to subdivision, in order that women might perform the lighter and less complex tasks and men the heavier and more complicated work—in other words, to determine the class of work in each shop or industry that women could both safely and efficiently perform.

To do this quickly and profitably, it was suggested that a Planning Department be organized in each plant, which could make scientific operation studies of the different kinds of work or operations, and in conjunction with the Superintendent and Department Heads, classify the work women could do.

As an excellent cooperative measure, it was also suggested that use be made of district Factory Inspectors or women physicians, or both, in determining what women could do, or better yet, **what they could not do.**

As part of the program, it was felt that the mechanical phases of factory work should receive careful attention—hoists and conveyors to be utilized to eliminate unnecessary lifting and handling; development of mechanical devices—jigs, tools and fixtures,—looking towards making work simpler and easier to do; development of single purpose machines, both semi-automatic and automatic. In connection it was suggested that investigations should be made of laborious operations performed by men, with the view to developing labor saving tools, and then use female labor.

It was also thought that insofar as might be practical, machinery should be rearranged so women could be worked in groups. Further, women should be given different things to do during the day, to avoid overspecialization and to relieve the monotony which inevitably follows, when a person does the same thing day in and day out.

Men should set up work excepting in cases where rigging machinery is a comparatively simple and easy task. It was felt that a safe rule to follow in determining what women could do, would be—

a—Experienced men for difficult and complicated work.
b—Laborers for heavy manual work.
c—Women for light, simple or semi-complicated operations with men setting up the work.

For instance, one field where women could work to advantage would be tool making, a line of work which calls for the very qualifications women possess—neatness, accuracy, precision, dexterity and quickness.

In other words, an analysis of work, based on a consideration of the above fundamentals, would very quickly in each department, plant and industry, determine what women could and could not do.

A list of permissible operations for women could then be worked up, by the government or under government direction, and industry generally advised as to the field for women, along the lines followed in England.

Appendix B will give a clear outline of the work women can do in England outside of strictly munitions work, which is covered to some extent in Appendix D.

## B—Finding the Women

After determining the nature of work in industry which women can perform with safety to their health and strength, the task becomes one of finding the women who are fitted to take up industrial occupations. Where are we to find them? How are we to induce their consent to enter the factories?

Analysis of the answers to the questions revealed that there were a number of avenues of approach. In the first place a great many felt that as we become more and more organized for war, the non-essential industries, wherein women were employed, could contribute not a little to the supply of female labor, but whether or not this will lead to much, depends to a large extent on what the non-essential industries are and what the government's attitude is likely to be towards this great question of "business as usual."

Unquestionably, a great many women could be recruited from the ranks of those known as household servants, for in this crisis we could do very easily without servants. Then there are the childless married women, who could serve all of their time, and the married women whose families have grown up and who could serve for part of their time. In the so-called idle and leisure class, many women could be found to assist as well as many unemployed women who would like to work.

There is also the large number of wives and sisters of soldiers who have gone to camps or to the front. A large number of women from the rural districts, not directly engaged in agricultural pursuits, could also be recruited. We are using colored men, why not colored women under a colored matron? Then there are many wealthy girls whose patriotism could be appealed to. By far, the largest number could be drawn from the families and friends of those already employed in factories. At any rate a review indicates that there would be plenty of women to draw from if they are needed.

The next point is how to induce them to enter industry. The consensus of opinion was that if wages for women are to be the same as paid men for the same work; if conditions are made both attractive and such that women can work without injury to their health, there would be no question about getting them to respond, should an appeal be generally made for women.

It was felt that appeals could be made through—

Women's organizations.
Schools.
Y. W. C. A.
Epworth Leagues.
Catholic Societies.
Churches.
Factory Bulletins.
Moving pictures, showing women at industrial work.
Industrial exhibits showing through women, how factory work is done and what is made, women to be admitted free.
Departments of Labor—state and national.





Associations of Manufacturers.
Editorial support by newspapers and magazines.
Advertising, like the appeals to shipworkers and ordnance workers.
Magazine and newspaper articles.
Public lectures.
Campaigns putting before the women of America, what the women of England have done.

It was felt by several that the basis of the appeal should be to so place the matter before women as to insure against their losing caste by going into the shops, that it would not be degrading work but big, patriotic, and a real help in this crisis.

A number thought that women could be recruited the same as men are employed, through making it known that women were wanted and engaging the best of those who applied for work.

It was felt by many that the Government, through the States, should take the work in hand; make a census or house to house canvass and recruit in this manner, and if the case gets really critical, to exercise the right of selective draft, for both men and women for industrial work.

Still others were of the opinion that through women employment managers and the employment exchanges throughout the country, plenty of women could be located and induced to apply for work. One very good suggestion was to have the Government work through the National Chamber of Commerce, wherein labor, women and the manufacturers would have representation. Another suggestion was that a campaign like that of the Red Cross could be instituted and secure sufficient women workers for industry.

## C—Selection of Women Workers

Knowing the work that women can do in industry and having worked out plans for inducing women to apply for work, the next step is that of selection. This question seems easy of solution according to the answers received—simply match qualifications against requirements. In other words, the task is one of determining character of work and select type of women who can do it, or to put it another way, find the women who can work and then train them.

Several suggest both physical and mental examinations with tests for deftness, strain, fatigue and skill.

Among the qualifications which should be considered, as taken from the answers, are—

| | | |
|---|---|---|
| Age. | Education. | Moral character. |
| Adaptability. | Physique. | Looks. |
| Past experience. | Health. | Cleanliness. |
| Type. | Strength. | Social standing. |
| Nationality. | Intelligence. | General aptitude. |

One suggested that women be tried at different tasks before determining what they might best be suited for; another that a list of the various kinds of work should be posted, showing the women the nature of the same as it is done in the shops, and let them select the kind they feel they are best fitted for.

Several felt that it was a matter to handle through women employment managers and women supervisors, the same as men, only much more carefully. It was also felt that after employment, close supervision for from four to six weeks should be made to see to it that requirements and qualifications did match.

One very excellent idea was that women should be classified by local boards, not only with reference to physical and mental fitness, but home demands as well, and that employers should requisition these boards, on approved forms, stating kind of work, location of plant, conveniences for female labor, housing conditions and other important factors affecting women workers.

It was felt by several that teachers should not be used in industry, unless absolutely necessary, as this would have a detrimental effect in educational work. It is further thought that some distinction should be made as between the family woman, the business woman and the scientific woman.

In many cases women could take up the same work as their fathers, brothers and husbands, because of the ability of the men to assist and instruct the women in mastering the various phases of the work they are familiar with.

### D—Training the Women

Many of the women who apply for industrial work will be totally unfamiliar with factory work or the operation and handling of machinery, so that the matter of training becomes doubly important.

It will be necessary to organize a system of competent instruction, if the change to women employees is to be made rapidly and efficiently, and the heavy loss in production, while they are learning, is to be reduced to a minimum. To be prepared, the preliminary work toward organizing a crew of instructors should be started as soon as it is decided to use women workers.

The instructors to be used should be selected from the fastest workers in the organization. The mistake, however, should not be made of thinking that any fast operator will make a good instructor. There are many people who are able to do things who cannot impart their knowledge to others, or explain logically how they accomplish their results; consequently they are useless as instructors.

The work of the instructors selected should now be carefully studied, with a stop watch if necessary, and the fastest method of performing the operations should be determined, and the method should be taught to all instructors.

When women are hired they should be immediately turned over to an instructor and the instructor should stay with them until they are performing the operation exactly as taught. The instructor may then leave, but should return at frequent intervals to watch the progress made. In no case should new employees be only partially instructed or allowed to choose their own way, for once workers have learned to do things





the wrong way at a fair speed, it is doubly hard to make them give that way up and teach them the right way.

Instructors should be selected for their ability to explain things clearly; for pleasing personality, tact, patience, sympathy and consideration for the rights of others; for ability at performing the tasks they are to teach, and wherever possible unusually masculine men should not be put in charge of instructing women.

One suggestion was that instructors be recruited from the women of a community, who have shown executive ability, and train them to in turn train others. Another good plan would be to let women work part time as a step toward training women who could be used as forewomen. Instructions should be given first by men, then by the women who become most proficient.

In connection with the general plan of instruction, industrial training schools should be provided, either as a community proposition, using the high schools and the colleges, or by the plants themselves, in fact it would be well to co-operate in either case with the local educational systems. Apprenticeship classes can also be formed or small squads of women can be put in the hands of expert mechanics.

As studies of operations were the first step recommended in determining what work women could do, they can again be used for purposes of training to excellent advantage.

One skilled woman to every ten women should be used to act as supervisor in helping women while undergoing training. Another suggestion was to take care of the matter of industrial training of women workers through co-operation with the Y. M. C. A. and the Y. W. C. A.

### E—Wages, Hours and Fatigue

The matter of wages, hours of work and consideration of fatigue, is most important in connection with utilization of woman labor. It can well be said that the success or failure of the movement depends to a great extent upon what we do with reference to these things.

The answers with reference to wages narrowed down to the following:

1—Determine standards, and pay according to performance.

2—Piece work, with minimum wage guaranteed.

3—Weekly wage for a time, then piece work.

The principle "equal pay with men for equal work" was subscribed to by practically all who answered the questions. One replied "Leave it to the women," feeling that they were amply able to take care of themselves.

Several felt that earnings in advance of those paid men should be offered to attract women workers and secure interest and co-operation, as for instance have a minimum wage which exceeds the amount provided by state laws, or pay the women 10 per cent more than men receive.

Some were of the opinion that while women should receive the same as men if they produce the same, they should receive less if they do not produce as much, but more if they can exceed the production made by the men.

All through the answers, it was plain to be seen that the feeling was—**No exploitation of women**—and one went so far as to urge that the Government take steps to prevent any possible exploitation in the unorganized industries.

Our review indicates quite clearly that organized labor has nothing to fear from the manufacturing world as regards women in industry.

In analyzing the questions as to hours, rest and fatigue, the conclusions were—

1—No night work.
2—No overtime.
3—No Sunday work.
4—Half Saturdays off.
5—An 8 hour day, some urging a 54 hour week.
6—A rest period in the morning and in the afternoon, in addition to the lunch period, and varying from 10 to 20 minutes.
7—Experiments to determine rest periods and fatigue factors in work of a very fatiguing nature.

It was also felt that nurses or matrons should be employed to observe the conditions of women; look for signs of strain, nerve tension and fatigue, in order that women may operate at maximum efficiency in a physical way. Several suggested that arrangements be made to have male physicians assist in this important matter.

The question of the health of the woman worker is of vital importance, and too much emphasis cannot be put upon it.

No applicants should be hired who have contagious or infectious diseases. The examination of the eyes is frequently neglected and yet there is no trouble so common or so frequently neglected by the person hired, as defective eyesight. In most cases the trouble can be quickly and easily remedied. While knowing that this matter is usually neglected, we must confess to having been somewhat surprised on finding in a plant making optical goods, that no attention was paid to the eyes and that in the assembly of eyeglasses there were girls who were so near-sighted that they had to bend close to their work in order to see the fine parts they were assembling. No attempt had been made to fit these girls with glasses.

The teeth are now recognized as one of the most common causes of human ailments, due to the frequency with which they generate pus and feed it to the body, poisoning the whole system. Not only are acute troubles, such as rheumatism and kindred ailments, frequently due to the teeth but many of the long lasting diseases that keep people below par and interfere with their efficiency are also due to them.

Not only should applicants for employment be required to take a physical examination but employees should be periodically examined. Prompt medical attention in case of even minor injuries and in case of sickness is so valuable that considerable reductions in insurance can be obtained when a medical staff is maintained in a plant and some insurance companies will even go so far as to maintain their own doctors in a plant, on account of the reduction in liabilities thus obtained. Prompt attention to a scratch frequently prevents blood poisoning.





If a plant is not of a size that warrants retaining a doctor and dentist permanently, arrangements can be made with local practitioners to handle all plant cases or else several concerns can associate and retain one medical and dental staff. However, in this case employees will require additional time for medical attention and will lose that much more production.

It is not necessary for the plant doctors or dentists to treat patients, they can merely examine and diagnose, and the employees can then consult their own doctors. But care should be taken that they select reliable practitioners, although in case of prolonged sickness they should be visited from time to time by the company doctor.

Employers and employees should get together on the important matter of wages, hours of fatigue and work out definite rules and procedure. Much that was done in Great Britain will be found helpful and Appendix D will be found of value in connection.

### F—Working Conditions

Another very important factor in connection with the utilization of woman labor is the matter of the conditions under which they work. Select the best of women, pay the best of wages; if working conditions are not right, the result is bound to be both discontent and dissatisfaction.

The shop is a second home, in which many hours are spent each day and if this thought is made the basis for improvement in working conditions, there will be a much better relationship between the workers and the employers.

All workrooms should be generously lighted, which helps the speed and accuracy of work. It would require a study of particular conditions to recommend the changes necessary for correct lighting, but it will be found that a generous use of white paint on walls and ceilings and even on machine bases, will accomplish wonders in improving the light, and next to this clean windows are a great help. In regard to artificial lighting, in rooms with white ceilings, the indirect or semi-indirect method of lighting is superior as it is easier on the eyes and no shadows are cast.

In regard to ventilation, you will find languor, headache, and a disinclination to work where the air is allowed to get stale. Fresh air should be admitted and bad air removed from rooms in such manner as not to create drafts. Any ventilating system that accomplishes this will be satisfactory.

Temperatures of rooms should be kept constant. The best temperature to maintain varies in accordance with the strenuousness of the labor performed in the room. With a little study of conditions the most satisfactory temperature can be determined, and there are any number of devices made which will automatically keep the room at the temperature desired.

The question of the position at work is especially important for women as their health and efficiency are largely dependent upon it. Wherever possible their work should be arranged so that they may be seated, and the chair or stool designed so that they will sit in an erect position. Where their labor requires that they stand a large part of the time, high-stools

can be designed on which they may rest in a semi-sitting, semi-standing position. Special attention should be given to arranging their work about them so that everything needed is within easy reach. This not only adds to comfort but greatly speeds up the performance of the operation.

Labor saving devices should be installed wherever possible, to eliminate lifting and handling by women. Men should of course do the heavier work. Safety appliances should be given the most careful attention and rigid "safety first" rules determined and as rigidly maintained.

Women should first start on the lighter tasks and as they become proficient can take up heavier work, if physically able to do so—a matter to be left to the matrons, nurses or female physicians.

Under no consideration should women be placed at what might be called dangerous occupations, or work where they are likely to be poisoned or suffer bodily injuries through explosions. They should not be placed in departments where gas fumes or dust would prove detrimental to their health, nor should they be subjected to intense heat or intense cold.

In introducing woman labor, new buildings or new departments or new floors should be added, if possible. Women should be segregated if this can be done, either by new buildings or rearrangement of departments or machines. At first men would have to be used as foremen but later forewomen could be used.

There should be no smoking by men when men and women are working together, and it would be well to allow women the right to sing as they work. There should also be provision for emergency illness with a nurse in charge if no hospital is a part of the plant.

As work is bound to get monotonous, if the same thing is done all the time, arrange as far as possible to change the tasks during the day so as to furnish some variety, a variety that will keep a woman standing at one time and sitting at another.

After lunch and during recreation periods, women should be allowed to completely relax and enjoy themselves, as this will be found to keep them in the best mental and physical condition. A music room with piano or victrola, where they can dance, will be found a most excellent provision. Physical exercise during one of the rest periods will be well worth the effort as all will appreciate the value of 10 to 15 minutes of setting up exercises daily. A library with books and magazines will be used to advantage by those who do not care to dance. Provide rest rooms for those who would rather lounge than dance or read.

Shops should be kept as clean as possible; dark nooks and corners should be done away with, so that everything may be kept clean and light; walls and ceilings should show plenty of white and it would also be well to paint machines with a white oil proof enamel, all of which will do much to make the shop a real second home to the women, whose maternal and womanly instincts should be appealed to. Are they not worth it?

Separate entrances for men and women should be provided, or better yet, men and women should arrive and leave at different hours, so that there will not be that intermingling that is often so objectionable to women.

Working clothing of women should be standardized. Overalls can be





used or waists and aprons. Caps should be worn for protection of the hair. Whatever is used should be uniform, neat and kept clean. If all are dressed alike, there will be less rivalry as to dress and less in the way of comments by the women regarding the matter of dressing.

A matron should be employed where women are at work, who can see to it that the factory laws are lived up to; watch for any violation of the "safety first" rules and also look after the general health of the women. If possible, this matron should be a nurse.

Provisions should be made for properly policing the streets when women enter and leave the works, so as to guard against women being molested by rowdies and loafers, so often observed on our street corners in industrial sections.

It is also recommended that 45 minutes be allowed for lunch, to give the women ample time for eating as well as for recreation.

There should be provided for the women workers dressing rooms, lunch rooms, toilets, drinking fountains, lockers and a hospital which can be used for a rest room during recreation periods.

The providing of healthful working conditions while important where men are concerned is doubly important where women are used. If women are willing to step in and fill the places the men have left vacant in industry, it is only right that industry should surround them with conditions conductive to their health and well-being.

As regards how this work should be done it was felt that there should be Government standards with supervision of such an organization as the Y. W. C. A., to maintain them, working through women's committees, the matrons in the plants to be the point of contact between the employers, the workers and the Government.

With reference to sex complications, Rheta Childe Dorr has this to say in the New York "Evening Mail":

"Let us be quite frank and translate 'complications,' as most people will employ the word in sex complications. Should we have that bogie to deal with if American women took over the civilian tasks now performed by enlisted men?

"The highest English command raised that question when Florence Nightingale took her first heroic little band of women nurses out to the horrors of the Crimean campaigns, and that little band of heroic women answered the question for all their sisters who were to come after them.

"Have any 'complications' arisen from the thousands of Red Cross nurses who have volunteered for the field during this war?

"Have the Y. M. C. A. and the Y. W. C. A. women 'complicated' matters for any army? They have not, and neither would any other service of women at home or abroad."

### G—Living and Social Conditions

The matter of clean, wholesome living and social conditions can best be handled through an organization of the manufacturers of a community, unless a single plant is of such size that the necessary investment can be taken care of without embarrassment. The women in the vicinity of a

plant will frequently have their own homes where they will live, but the women drawn in from the surrounding country will require clean, wholesome places where they can board at a cost consistent with the wages which you are able to pay them. Many of these women can be placed by carefully canvassing the respectable families in the neighborhood and finding those who are willing to take boarders. Good results can be accomplished by constructing boarding houses and placing them under competent managers. These can be run at cost or at a slight profit, and excellent wholesome surroundings can be provided at extremely reasonable rates. Often women will desire to club together and take a house and the company should be able to provide houses at reasonable rentals to those desiring them. The advantages of the company boarding houses are that they assure the women of meeting other women and having social intercourse. The lonesome woman soon leaves her job and goes home where she is known.

The contentment of a woman employee might be said to depend one-third on wages and working conditions, one-third on living conditions, and one-third on good wholesome amusement. The question of amusement is an important one and seldom receives the consideration which it deserves. If a woman thoroughly enjoys herself during her hours away from work it will be difficult to induce her to leave the community she is in even for higher wages.

Amusements are simple to provide, as they should be made self-supporting and all that is needed is the initiative to start them. Bowling, sewing, dancing and card clubs should be arranged for. All that is needed is bowling alleys where respectable women can go, or a room large enough for them to dance in, or where a number can sew or play cards. Even outdoor sports are appreciated and a few tennis courts could be used and paid for as used. Moving pictures are a standard amusement and if there is no theatre in your town where good pictures can be seen at a very reasonable price, one should be provided.

If there are class distinctions do not try to combat them for you will fail. Let the women determine their own social levels and run their own clubs, admitting whom they wish. All you need to do is to supply the initiative to start them. Above all, do not deal with your employees on a charity basis. Let them pay for what they get, and make it as reasonable as possible. There never was a worker that did not resent anything resembling charity.

Y. W. C. A. cantonments, community kitchens and dormitories will assist materially in the matter of feeding and housing women workers if the manufacturers of a locality cannot get together. On a large scale, social settlements can be developed.

Organizations should be formed for the mental, social, physical and religious betterment and welfare of women.

Co-operative club houses to be run by women for women is another means of solving the problem of providing proper living and social conditions.

Don't overlook the importance of a woman's gymnasium in club





houses and arrange for women to invite their men friends to dances. Have fudge kitchenettes and spooning parlors—they will help materially.

Neighborhood recreation centers under church or women's societies can be worked out in a campaign to look after the women during their spare time. Provide plenty for them to do but the decision must be theirs to a great extent as regards what they will want to do.

There should be instructions as to wholesome living conditions by traveling nurses, and nurses' associations of the Y. W. C. A. can do a great work in keeping living and social conditions on a high plane.

You must not overlook, however, that women workers are going to have a lot to say, and rightly so, about this big question of living and social conditions and as many have said, the same pay as men for the same work, will enable women to go a long way towards working out their own salvation. On the other hand, what is done for them, if it does not savor of charity, will be welcomed and appreciated.

Employers can do much to see that right conditions are provided, but a far greater work can be done if there is plan and program to it all, backed by Government support and co-operation.

A Government commission should first of all work up proper conditions as to living and social welfare of women, leaving sufficient latitude for the consideration of purely local conditions, for they are bound to vary with the different sections. Certain matters pertaining to the health of women workers could be put up to the local health boards. Committees of women workers could be organized to work with the other bodies having this question of living and social conditions in charge.

Campaigns among industrial leaders; propaganda as to safety first, health, diet and the like; organizing the superintendents of plants to co-operate, are steps which will lead to substantial results.

An organization like the Y. W. C. A. or the State Councils of Defense could well have such a work in hand, or the women's clubs of the country could form committees and organize social workers corps in the various localities.

Where legislation, either state or national, is needed to provide proper conditions for women, the women, in conjunction with the manufacturers and the Government officials, should see to it that they get it.

A social secretary for each plant employing women would be an excellent move, these women to be selected by the Y. W. C. A., or directing body, to work on all problems affecting the lives of women out of the shops, the same as the plant matron looks after the conditions of women while at work in the plant.

Another suggestion was that living and social conditions affecting female labor should be investigated continuously by authorized parties appointed locally; these investigations to be paid for by the manufacturers employing women, in proportion to the number they employ.

### H—State Laws

As regards the matters of changing or unifying the existing state laws, there was quite a difference of opinion. Some felt that national legislation

was immediately necessary, while others thought that the laws in the various states were satisfactory as they are.

One suggestion was that national legislation should set aside present laws, for the period of the war, after a standard set of rules governing woman and child labor had been developed, and finally enact a uniform Federal law governing all labor.

Another suggested that state laws should be modified and corrected wherever necessary, to circumvent both unfair employers and labor unions.

From the answers received plus an analysis of the state laws, there seems to be a need for some national legislation of an emergency nature, so that standards can be set and then maintained and while it may be said, and truly perhaps, that the present is no time for new legislation as important as this, it was felt that much could be done by bettering the present laws.

Legislatures of the various states could appoint committees and work together and with the Government, women's organizations, labor unions and bodies representing the manufacturers, out of which a uniform law embodying the best in the present laws could be developed.

One suggestion was—"grant suffrage and then consult the women." Another was that a national organization be formed in which labor, the employers and the Government would be represented to undertake this matter of changes and unification.

In Appendix A will be found a digest of state laws, a study of which will clearly indicate the need for national legislation. We cannot vouch for the extreme accuracy of this compilation, but we have taken it from reliable sources, compilations as made by the "American Machinist" and the "Merchants National Bank of Boston."

A few words regarding the differences in the state laws will prove illuminating.

Of the 49 divisions represented only California and the District of Columbia limit the day's work to 8 hours and the week's work to 48. Although an 8-hour day has been legislated by Arizona and Colorado, the weekly limit is 56 hours—thus countenancing the 7-day working-week.

The 9-hour day for women is established in 14 states in 6 of which the weekly limitation is 54 hours; in 3, it is 54 to 60 hours; and in 2, no weekly limit is fixed.

Ten hours women's work per day is lawful in 11 states and 10¼ in New Hampshire (in a 55-hour weekly limit). According to the law as amended in 1911, Illinois permits a woman to work up to 70 hours in a week. (Later compilations were not available in preparing the digest.)

Besides Illinois, 4 states allow a 7-day working week—Colorado, Montana, Texas and Washington.

Iowa and West Virginia place no limit whatever upon woman's working hours, as such. Indiana appears to have no limitation laws; and as to 14 states, available information is lacking as to current status of such laws.

In a number of states certain occupational exceptions are made—especially as affecting women's night work; but speaking generally 37





states permit women to work after dayshift, and 2 do not (Michigan and Pennsylvania). Nine states do not make the night-work clause effective unless it continues until 9 P.M or 10 P.M.

In no particular is the abject lack of uniformity shown better than concerning an attempt to regulate minimum wages for women. Nine states attempt definite regulations but in almost all instances, exceptions are in evidence.

Some states claim the minimum as "based on economic principles" (abbreviated BEP), but variance here is also great. California shows the highest minimum, $43.33 per month ($10 a week); but its BEP rate is 13c to 16c per hour—and there a "pound scale of wages," also. Utah gives 90c and $1.25 per day as minimum, while Colorado makes the rate $1 a day, or $20 a month (which latter figure is equivalent to less than 80c a day for a 26-day month).

Though showing sharp gradations, the female child labor-age-limit is more uniform than any other of the data shown. There appears to be a genuine attempt to discourage employment of girls younger than 14 years. The 27 states naming this limit are outdone, however, by 3 states that place it at 15 years, and 10 states which have raised it to 16 years.

In seeking legislation to exclude women from objectionable occupations, it is natural that mines and saloons should be prominently mentioned; but the only other similarity affects "cleaning moving machinery" —an objective more appropriately reached, it would seem, by a general revision and clarifying of factory inspection and safety laws. Another similar illustration is seen in the attempt to bar women (in New York) for "all grinding and polishing operations"; whereas, it is well known that adequate plant equipment will include capable exhaust blowers that remove the dust-laden air and thus make such departments entirely habitable. Moreover, if it is well to make such exclusion of women on the score of public health, it is equally desirable to prevent the menace from reaching male workers; and the logical way to remove this and other industrial dangers is through carefully planned factory inspection and safety requirements.

## I—Co-operation of Labor Unions, Women's Associations and the Government

### 1—LABOR UNIONS:

It was felt according to the answers received, that the labor unions would not take kindly to the introduction of women labor and that we could expect to have the same trouble England experienced at first in her attempts to utilize women labor to the fullest. The clash that is ever with us between capital and labor is another reason why this matter of using women in industry will not be settled without considerable discussion and debate between workers and employers. This will be especially true if the labor leaders take the stand later on that there is no shortage in labor.

In the first place no wholesale attempt should be made now to use women in industry. Man power should first be used fully and efficiently. Plans for women in industry should be worked out from now on, however, for in the event of a long war, which seems likely, women will be needed to the fullest extent. To this end steps should be taken by the Government, by manufacturers, and by women's organizations, to make organized labor realize the seriousness of the international situation. If public opinion cannot induce their leaders to see need of women in industry, sheer necessity will sooner or later force them to allow women to work side by side with the men.

To secure the co-operation of labor, there should be publicity and appeal to show them the real situation as it is likely to exist in case there are several years of war, in order to get labor to waive restrictions on output, and the use of women during the war, as England labor did.

All steps should be fully explained at an early opportunity and nothing short of the utmost frankness on both sides should be considered for a moment.

Efforts should also be made to analyze and anticipate the fears of labor, for in this as in everything else, differences are the result of misunderstandings, and **there should be no misunderstandings in this crisis.** It should be made plain to labor that no displacement of men will be made when men are available; that men returning after war will be given work to do—and this must be Government promised which should be carried out. If these are agreed to, no difficulty should be encountered especially if in the use of women there are the following considerations:

**Equal pay for the same work; same hours; right of women to organize; suffrage; and maintenance of proper working, living and social conditions.**

If labor objects after the above are provided, then it hasn't a leg to stand upon, and the Government should step in, establish profits, arrange for compulsory arbitration, waive restriction on output and use of women labor, prevent cutting of rates and insure proper working conditions.

My own conviction, and that of many I have talked with, indicates that organized labor will not object to women labor if it understands that women labor is not needed now and that the rights of women and of labor in general will receive consideration.

It is thought by some that labor unions should incorporate so that they can be dealt with the same as business corporations are, so that by bringing both together, with Government representatives, proper rules and legislation can be worked out, that both would have to live up to.

It was also thought that women should be allowed to join unions or form new ones of their own, and that they should work in harmony with organized labor.

It was also felt that the War Labor Administration or the National Chamber of Commerce, or both, should in conjunction with the American Federation of Labor and the Council of National Defense, find a solution of the labor clash during war times.





WOMEN'S ORGANIZATIONS:

No difficulties are expected in securing the full co-operation of women's organizations, in fact they are doing nobly at the present time, in doing all they can to win the war.

In getting them to work to the fullest in making "women in industry" a real success, the appeal must be made to patriotism, sense of duty, the need for them in this crisis and that the underlying considerations will be, equality with men; earnings as a basis for social standing; proper working, living and social conditions; right to organize; no loss of caste because women work in shops; no exploitation; same pay for same work; enforcement of better laws and the maintenance of high standards.

To this end propaganda is needed through the lecture platform, the press and magazines, churches and schools and trips through plants to explain why women are needed, what they would be called upon to do, and the manner in which they would be called upon to do it.

GOVERNMENT:

What was said with reference to union labor and women's organizations, applies equally well to the Government. Manufacturers must get together and work with the Government as well as with labor. The politicians must be made to see the need of women in industry, in increasing numbers, and have the courage to come out and say so. The National Chamber of Commerce can be a factor along these lines. Some felt that full cooperation of the Government was not necessary. Even if this is so, and I doubt it, it would be a decided help to get the Government to take the initiative and working with the manufacturers and with labor, see to it that we efficiently use and at the same time properly safeguard, our women workers. In this connection all present work should be coordinated and any laws against the proper utilization of women in industry should be repealed.

The new War Labor Administration should make exhaustive investigations of this whole subject and with Government officials in conjunction with representatives of manufacturers and labor, devise ways and means, of using our women in industry.

### Post-Bellum Considerations

The question—"What about woman labor after the war"—is a most important one. One of the reasons labor is opposed to women in industry, is its fear that women will remain to displace men after the war is over, which makes a consideration of this point very necessary.

Many of those who answered the question felt that the situation would take care of itself when the war is over. Many soldiers will marry upon their return; women in the factory will meet and marry shop men and take up domestic work later on; other women who desire to do their share during the war will go back to the pre-war occupations or activities—homes, offices, life of leisure and the like; those who become skilful and like industrial work will want to remain in the shops. It was felt by many that if the war lasts long enough, we will number our dead and disabled through injury or disease by the hundreds of thousands, thus depleting

the industrial ranks. Thousands of the disabled will have to be supported in many cases by the wives or sisters of the crippled or diseased, all of which will call for many women remaining at work.

The opinion of many is that the reconstruction is going to call for so much in the way of replacements, new construction and the like, that labor will be in great demand for years to come and that this very demand will induce many women to remain in industry.

The general feeling was, however, that the men who return should be given back their old jobs or that new work should be found for them; that home would make the real appeal to women and many would drop out for this reason, and that while the life of independence and high wages would hold a great many at work, many others would drop out because of not finding industrial work to their liking.

Several other factors must be also taken into consideration. Many foreigners will return to their home countries after the conclusion of peace, which will make large gaps in the ranks of industrial workers. One man wrote—

> "We employ quite a large percentage of foreign labor and from my observation I am inclined to believe that a large majority of these foreigners will return to their native country as soon as the war is over. Germany and Austria-Hungary are, we understand, offering great inducements for the return of their subjects after the war and these subjects can return in a very much higher plane than they left. They have been fattened by war wages and in a great many instances will be able to practically retire, accordingly, the women that are now induced into industry enterprises will be needed for a good many years after the war is over."

Steamship companies report that from 500,000 to 1,000,000 aliens are planning to go back to their respective countries when the war is over, About this point, Frederic C. Howe, Commissioner of the Port of New York, says—

> "Instead of surplus of labor there may be quite a universal shortage and those countries that make conditions most attractive are going to secure immigrants and keep their own population."

In other words, we may change from an immigration to an emigration nation.

If the plan of using women in industry works properly, and society as a whole is benefited, employment of women will undoubtedly continue. There is no question about it, the use of women in industry is going to teach valuable lessons to both labor and capital; through suffrage, which is coming, women will have a greater say about things than ever before, and as the war is developed a place for women in the conduct of affairs, she will have a voice in whether or not she will be used by and in industry, and if used how it will be done. It will be found, at any rate, that the best of men and the best of women will naturally improve things, both in and out of industry.





With reference to women returning to their old lines of activity, Rheta Childe Dorr, in the New York "Evening Mail," has this to say about the English women—

> "They were to be put out of the trade as soon as the emergency was past, but now it is beginning to be feared that they can't be put out. Think of the black ingratitude of any set of men, trade unionists, soldiers or statesmen, who would try to put them out.
>
> "Some of the men in the shops, foremen and skilled workmen who have taught the women, helped them to develop skill, openly declare in favor of keeping them on. Many employers say that they will keep them.
>
> "The opinion has been expressed that the women will voluntarily leave the mechanical trades. Many married women probably will. Some, perhaps, of the leisure class women who have gone to work from patriotic motives, will go home, do church work, pour tea and read novels. More of them will have learned to love work for its own sake and they will stick.
>
> "That any number of women now working for good wages in skilled trades will meekly hand the jobs over to men and go back to $3 a week in a millinery, dressmaking and domestic service, is to my mind unthinkable. Imagine a woman who has risked her life loading shells, who has known the job of creating great steel engines, of making winged machines that helped to win the greatest of wars, going back to washing dishes or toiling in a hot loft on a power sewing machine."

It must be remembered, also, that the war is teaching men the wonders of outdoor life, and many will go West and on farms, and this will also have its influence in creating a demand for labor after the war, and while at first there is bound to be a violent readjustment, it will be of short duration, as there will be so much work to be done in the way of reconstruction that everyone who will want to work will find work to do.

One man said:

> "After war, smart women will work, lazy loaf, same as now. Might put petticoats on third rate men and trousers on the smart women."

It looks very much as if the proposition will adjust itself, as men and women will fit themselves for tasks they can do best. We cannot get away from this basic argument—*if there is a dearth of men, women will be needed and will work, whereas if there is an oversupply of men, women will have to give way.* The law of supply and demand may be expected to work here as in other things.

As a constructive measure a national commission should be appointed by the Government or the War Labor Administration to consider this very point, conduct investigations and work up a logical plan demobilization of women in industry; of maintaining the army as it returns and releasing the men to industry gradually, so as not to dump millions of them on the labor market, before plans for the handling of both male and female labor have been worked out.

Conferences with these ends in view between labor unions, women's organizations, employers' associations and the Government should also be arranged for, as well as a program of co-ordinated action between the employment bureaus of the country.

There may also be quite a little legislation necessary, as for instance a law to prohibit married women from working in industry who live with their husbands, and whose wages are sufficient to support both.

In connection with these twelve questions, it may be interesting to note the replies of Hilda Muhlhauser Richards, Chief Women's Division, Department of Labor:

1. How are we going to find the army of women needed?—Answer: Through registration at city, state and Federal employment offices and all other agencies.

2. What basis shall we use for selecting women?—Ans.: Experience and training.

3. What efforts shall we make to provide proper living conditions?—Ans.: Must be provided through Government housing.

4. What changes will we have to make to provide working conditions?—Ans.: Establish through legislation.

5. What social conditions will we have to provide?—Ans.: Provision for recreation and volunteer units to look after women like the English System.

6. What hours should women work and how about rest periods, fatigue, and the like?—Ans.: Eight hours.

7. How will we arrange to subdivide and arrange the operations so that women can efficiently perform them?—?

8. How will we train women, and who will do it?—Ans.: Through vocational training schools and classes in factories under Government.

9. What steps will be necessary to induce the full co-operation of—(a) Labor Unions? (b) Organizations of women? (c) Our Government?—Ans.: Committees. Dr. Anna Howard Shaw Committee. Department of Labor, Women's Division.

10. What step necessary to change and unify state laws?—Ans.: None.

11. How shall we adjust and arrange the wages of women?—Ans.: By careful legislation like the 8-hour law for engineers, conductors and trainmen.

12. What will we do with reference to woman labor after the war?—Ans.: Prepare now. Commission ought to study readjustment.

In Appendix C will be found a list of representative opinions of many of those answering the questionnaire.

### Standards

The Ordnance and Quartermaster's Departments' standards and the standards of the Women's Trade Union League regarding this question of women in industry, along with some standard practice worked out by the Executives' Club of Detroit, are herewith submitted, as they will be found of value in connection with a proper consideration of this subject.





**Standards Ordnance Department and Quartermaster's Department and Division Women in Industry, Women's Committee of Council of National Defense.**

### Standards for Employment of Women

1. Hours of Labor.—Existing legal standards should be rigidly maintained, and, even where the law permits a 9- or 10-hour day, efforts should be made to restrict the work of women to 8 hours.

2. Prohibition of Night Work.—The employment of women on night shifts should be avoided as a necessary protection, morally and physically.

3. Rest Periods.—No women should be employed for a longer period than four and a half hours without a break for a meal, and a recess of 10 minutes should be allowed in the middle of each working period.

4. Time for Meals.—At least 30 minutes should be allowed for a meal, and this time should be lengthened to 45 minutes or an hour if the working day exceeds 8 hours.

5. Place for Meals.—Meals should not be eaten in the work-rooms.

6. Saturday Half-Holiday.—The Saturday half-holiday should be considered an absolute essential for women under all conditions.

7. Seats.—For women who sit at their work, seats with backs should be provided, unless the occupation renders this impossible. For women who stand at work, seats should be available and their use permitted at regular intervals.

8. Lifting Weights.—No woman should be required to lift repeatedly more than 25 pounds in any single load.

9. Replacement of Men by Women.—When it is necessary to employ women on work hitherto done by men, care should be taken to make sure that the task is adapted to the strength of women. The standards of wages hitherto prevailing for men in the process should not be lowered where women render equivalent service. The hours of women engaged in such processes should, of course, not be longer than those formerly worked by men.

10. Tenement-House Work.—No work shall be given out to be done in rooms used for living purposes or in rooms directly connected with living rooms.

### Standards of Women's Trade Union League

Women's Trade Union League has formulated standards which are subscribed to by the Women in Industry Committees of the State Councils of Defense. They are:

Adult labor.

Equal pay for women when they do an equal amount of work with men.

An eight-hour day.

One day of rest in seven.

Elimination of night work for women.

Exemption from call of women who have small children and for two months before and after childbirth.

That technical and trade training be opened to women in all schools and colleges on equal terms with men.

### Standard Practice Executives' Club, Detroit
### Report of Committee on Standards of Working Conditions

In order to protect the women who may enter industry at our solicitation and to provide for them fair working conditions, the Committee on Standards of Working Conditions submits the following recommendation:

1. That the Recruiting Committee investigate the applications from married women with children to ascertain if the children are properly cared for. Results of investigations to be filed with the Central Bureau.

2. That women be given **equal pay for equal work.** While learning they shall be paid the flat day rate paid men for the same work or operation. This recommendation has the endorsement of the Detroit Division of the Women's Committee of the Council of National Defense, as they passed a resolution to this effect on May 14, 1917. The committee understands that the Buick Motor Car Company, of Flint, Mich., is at present paying women on this basis.

3. Because of the experience of England, where it was found that shorter hours resulted in more and better work, we suggest that the working day for women be limited to eight hours and that the maximum weekly hours be limited to forty-eight.

4. That the following working conditions are essential:

a. Separate entrances to be provided for women, if practicable; if not, that women be allowed to report for work fifteen minutes later than men and leave fifteen minutes earlier.

b. That separate workshops be provided, if possible; if not, that there be both a man and a woman supervisor stationed in the mixed departments.

c. That rest rooms and toilets adjoining workshops be provided with a matron in charge.

d. That a sufficient number of drinking fountains be installed in each department.

e. That the period for lunch be at least forty-five minutes.

f. That, if possible, a restaurant be operated on the premises; if not, at least a counter maintained where a box lunch with hot coffee and tea and milk can be purchased at cost.

g. That provision be made for rest periods during working hours, their frequency and duration depending on the nature of the work.

h. That seats be provided wherever possible, to avoid injury to women by standing all day at their work.

i. That sickness insurance be provided to care for workers absent because of sickness.





j. That workers on monotonous and tedious operations, to avoid undue fatigue, be transferred from time to time as seems advisable.

k. That there shall be provision for first-aid attention to all workers.

l. That there be first-class supervision of working conditions with particular reference to safety, sanitation, ventilation and lighting.

m. That some person be delegated to act as welfare supervisor for the plant, to whom women shall have access and whose duty it shall be to have general oversight over welfare conditions. This position might be given to some woman already in the employ of the company, in addition to her other duties, but if possible a trained person should be secured for this work.

In setting up these standards the committee feels that its work would be useless and ineffective unless a permanent committee was appointed by the executives to investigate working conditions in each plant employing women to be recruited by the special committee organized for this purpose. Such a committee should not only make an investigation before placing the women, but should further make periodic visits to ascertain if the standards are being maintained according to agreement. Since it is almost impossible to set standards for first-aid and safety provisions without an intimate knowledge of the size and kind of plant and hazard of the work, we deem it advisable that this permanent inspection committee treat each plant individually, adjusting requirements in each case according to the conditions found on visitation.

We further suggest that this committee be made up of three safety engineers, three welfare managers, three employment managers and three time-study men, to be split up into three units of four members each, as the work to be undertaken will be heavy and more than one small committee can handle.

### Report of Committee on Recruiting and Placing of Applicants

Realizing its close relation to the Committee on Standards of Working Conditions, and to the Committee on Education, the Committee on Recruiting and Placing of Applicants desires to bring to your attention that the acceptance of the recommendations of the Committee on Standards of Working Conditions is vital to the success of this Committee; also that it feels the matter of education to be so important to the success of any scheme for recruiting and placing that it wishes to include the report of the Committee on Education as a part of its own report.

It further wishes to point out, that if this work is to be co-ordinated with the plans of the Women's Committee of the Council of National Defense, any statements or recommendations here made must be contingent on instructions to be issued from Washington.

The Committee proposes, as a means of reaching women desiring to enter industry, to distribute application blanks through the available avenues of the various women's organizations co-operating with the women's committee of the Council of National Defense. If necessary,

recruiting stations can be established at the headquarters of these organizations.

As the Council of National Defense will issue uniform application blanks for general service, it is obvious that this Committee should wait upon the arrival of the Government forms before preparing its special application blanks, adapted to the local conditions and plans, in order that the two may conform and our blanks, therefore, meet with ready Governmental approval.

It is further proposed that a Central Placing Bureau be established where applicants shall present their applications in person, having previously filled out the blanks. Opportunity would then be given them to meet any further and more detailed requirements, such as later might be found necessary.

When an application is turned in, it should be filed and card given in its place to each applicant, directing the applicant either to a particular employer, if already qualified for a position, or to the Educational Committee for instruction.

It is recommended that the Central Placing Bureau be in charge of a competent paid attendant, operating under the direction of this Committee.

It also seems necessary that this Committee be authorized to include in its work the investigation of the applications of married women, to insure that the statements made on the blanks agree with the actual conditions in the homes.

It is further believed that a physical examination should be made of each applicant.

## REPRESENTATIVE OPINIONS IN ANSWER TO QUESTIONNAIRE

In order to give those interested in this subject, "Women in Industry," an idea of the general attitude towards the movement, it was decided to embody the representative opinions of many who answered the questions. The selections were made with reference to the broad-minded, comprehensive and the high, idealistic views of those who co-operated. The list is by no means complete, as this would take too much space. Names were not considered in making selections. The underlying thoughts were used as a basis.

The opinions are as follows:

### How Are We Going to Find the Immense Army of Women Needed?

"If an immense army of women are needed, they will have to be drawn from the following classes:

a. Women now engaged in non-essential industries and those reduced through the war.

b. Women non-wage-earners now entering the labor market because of increased cost of living, withdrawal of other wage-earners who have been supporting the home, or because of patriotic motives. This class represents a mature group of women, including largely the married and widowed.





c. Domestics, who are using the attraction of high wages in other occupations to leave this work. Moreover, there has been a decrease in the demand for domestics owing to decreased households and high cost of living. The strength and maturity of these women have made them acceptable in the heavier lines of work where women are replacing men."

Louise C. Odencrantz, Supt. Women's Dept., State Department of Labor, State Industrial Commission, Capitol, Albany, N. Y., Jan. 28, 1918.

"Women can be mobilized by leaders of their own sex, but they will not consent to be exploited."

W. H. Hardy, Decatur "Herald," 237 N. Main St., Decatur, Ill., Feb. 25, 1918.

"State Chambers of Commerce could open registration books in which could be registered all the women now at work, or who would be willing to take their places in the various industries."

Mr. Geo. E. Hoffman, Sec., Monument Pottery Company, Trenton, N. J.

"The fact that so many women are engaging in industrial pursuits attracts others."

Wm. J. Kilpatrick, Factory Mgr., Burroughs Adding Machine Co., Detroit, Mich.

"Same as we find men, but use men first."

Alexander Palmros, Syracuse, N. Y.

"Determine by local surveys the exact needs; advertise these needs by all available methods:

1—Post Offices;
2—Public Employment Bureaus;
3—Local and national publications;
4—Present employees;
5—Social agencies.

Pool local needs and local labor supply so that there may be a proper basis for labor allocation."

Elizabeth B. Neustadt, 69 West 11th St., New York City.

"Each locality must supply the women needed therein. To procure these women I would hold an Industrial Exhibit showing the product of the different industries, and perhaps some of the processes used in their manufacture. I would have the women urged to come to such an Exhibit accompanied by their husbands. Then arrange for almost daily visits to the different local industries. Each city, as you know, is woefully ignorant of the industrial activities carried on in its midst."

W. E. Farrell, Pres., Easton Car & Construction Co., Easton, Pa.

"Advertise with a view of the motive necessary, that women should join the industrial force, showing their patriotism, to replace the men that will and are being called to the front."

S. Simon, Treas., The Johnson Friction Clutch, Manchester, Conn.

"There is a great productive power, or time factor, being wasted by women of the homes who have not sufficient work to occupy their time. By inducing these women to utilize this time to some useful or remunera-

tive occupation will place on the market a great number of productive time. It would probably be necessary to compile some statistics or take a census in order to ascertain about what amount of productive labor would thus be available."

D. A. Gilbert, Hotpoint Electric Heating Co., 2240 Ogden Ave., Chicago, Ill.

"While the male draft age limit is 31 years, I cannot see that it is necessary to recruit women generally for industrial purposes. If the condition of this country became desperate, I am of the opinion that there should be enforced a selective draft applicable to women as well as to men."

L. H. Heinke, United Light & Railways Co., Grand Rapids, Mich.

"By direct appeal of the Government for their co-operation and organization."

F. B. Milhoan, American Rolling Mill Co., Peoples Gas Bldg., Chicago, Ill.

"The Moving Picture-Lecture in Public Buildings has a tendency to procure a different type of women workers, for as the nature of the work and working conditions are displayed and explained, we are more liable to get the woman whose object is service, not remuneration."

F. Oscar Race, Sales Mgr., O. A. Rogers, 150 Bloomfield Ave, Bloomfield, N. J.

## WHAT BASIS SHALL WE USE FOR SELECTING WOMEN FOR INDUSTRIAL WORK?

"Physical examination and close observation for the first six or eight weeks of employment."

J. W. Weiss, Gen. Mgr., Hyatt Roller Bearing Div., United Motors Corp., Newark, N. J.

"Standardize all work to the tools and teach the women how to operate the tools."

F. R. Still, Vice-Pres. & Sec., American Blower Co., Detroit, Mich.

"Each woman wishing to offer her services should fill out a detailed questionnaire."

L. H. Heinke, United Light & Railways Co., Grand Rapids, Mich.

"Do not educate them to shift by taking them from their community if vacancies exist at home."

Frederick A. Flather, Treas., Boott Mills, 79 Milk St., Boston, Mass.

"The daughter of a machinist or tool-maker, for instance, who has lived all her life in the atmosphere, listening to the terms, expressions and methods of the machine shop, should make an apt student, and retain the information because of her environment, thereby being able to impart it to others."

F. Oscar Race, Sales Mgr., O. A. Rogers, 150 Bloomfield Ave., Bloomfield, N. J.

"Have a doctor's certificate stating just what work a woman could do, without injury to her health."

F. H. Purdue, Battle Creek Paper Co., Ltd., Battle Creek, Mich.





"Women who are raised on the farm and are physically fit can do a great deal of the farm work with the aid of improved machinery."

Earl L. Woods, J. I. Case Plow Works, Racine, Wis.

"A far more difficult question to answer in regard to women than men. The most frivolous and most flashily dressed applicants very frequently prove to be the hardest workers."

Holmes & Edwards Silver Co., Bridgeport, Conn.

"Examinations—on the plan of examinations for Government service."

Josephine Conger, Ed. "Home Life Magazine," 141 West Ohio St., Chicago, Ill.

"The kinds of work should be analyzed, classifying the kinds of work to be done according to physical, mental or both requirements. Some work would require women strong physically and others would require those quick mentally, and other work would require some education, etc."

James O. Craig, Pres., Business Men's Clearing House, 209 South State St., Chicago, Ill.

## What Efforts Shall We Make to Provide Clean, Wholesome Living Conditions?

"Selest a committee from the different Women's Club organizations in the United States and make them responsible for the conditions wherein women have to work."

P. J. Lyons, Pres., Bull Tractor Co., Minneapolis, Minn.

"Undoubtedly it would be necessary to provide better conditions than are ordinarily considered good enough for men."

Edw. J. Frost, Pres., Frost Gear and Forge Co., Jackson, Mich.

"This will depend upon local conditions. Where suitable accommodations are available, I do not believe that we should attempt to interfere with their methods of living outside of the factory other than to give such assistance as we can to find suitable living quarters."

H. F. Perkins, International Harvester Co., Chicago, Ill.

"It seems that plants working under Government contracts should have standards set and lived up to by the Federal Labor Department. In all plants there should be standards improving conditions and a welfare manager to see that they are lived up to. An educational campaign should be taken up with the manufacturers and sell them on the necessity of getting and keeping their plants in a clean and wholesome condition."

C. L. Pool, Sec.-Treas., Sherman Overall Manf. Co., Sherman, Tex.

"We believe that it will be necessary in localities where large numbers of women are employed, and where they have not been formerly in such occupations, to have women managers to examine the local conditions under which they live, and that the factories may have to co-operate with the local authorities in seeing that they are wholesome and suitable for such employees.

F. & E. Nock, Towle Manf. Co., Newburyport, Mass.

"An example has been set by the Scovill Mfg. Co., of Waterbury, Conn.: building small houses in rows, consisting of five rooms and bath, they rent or sell these houses to anyone with the provision that at least one person employed by this concern must have one room in the house."

F. Oscar Race, Sales Mgr., O. A. Rogers Tool & Die Works, 150 Bloomfield Ave., Bloomfield, N. J.

"Long before a concern gets to the physical examination, it should have the investigation of living conditions. I do not think we need to provide wholesome living conditions, but every concern should require it, and give instructions in connection with it the same as they would in the operation of their machines."

Messrs. Geo. W. Swan & Edgar E. Adams, The Cleveland Hardware Co., Cleveland, Ohio

"If women are transferred into another locality, there is great need of proper supervision and inspection of living conditions either by the Government or some other responsible private agency like the Y. W. C. A. The efficiency of the worker and retaining of her services will depend to a large extent upon her living conditions. One of the best means is to pay her a living wage so she may have the means to pay for decent living conditions. If women come in from other localities, some agency should be responsible for securing them living quarters before they arrive, and they should be met at the train. A firm employing a number of workers from other districts might properly employ a woman to meet them when they arrive, secure living quarters, etc. These could be secured with private families, or in boarding houses, or perhaps in dormitories operated by the firm or some social agency like the Y. W. C. A. Some agency should have a list of inspected available boarding places."

Louise Odencrantz, Supt. Women's Department, Dept. of Labor, State Industrial Commission, Albany, N. Y.

"The larger employers of labor can and should promote clean and wholesome conditions of living through direct personal effort of their service organizations. Apart from this, the work doubtless must be done through social settlement workers, trained nurses' associations, consumers' leagues, and other similar organizations existing for social betterment work and particularly such as touch the home problem."

P. G. Smith, Pres. & Gen. Mgr., Osborn Mfg. Co., Cleveland, Ohio

"It is of course desirable to provide clean and wholesome living conditions where women work. However, we regret to state that the sanitary conditions in our plants are more difficult to meet where women are working than where men are employed. This seems strange and very difficult to believe, but is nevertheless unfortunately the case."

W. A. Broadhead, Jamestown Worsted Mills, Jamestown, N. Y.

### What Changes Will We Have to Make to Provide Proper Working Conditions?

"Avoid any kind of patronizing and allow their sense of justice to work it out independently."

H. B. Perham, Pres., The Order of Railroad Telegraphers, St. Louis, Mo.





"The change required to meet the new condition would necessitate the adoption of labor-saving devices in every place possible. There should be no lifting of heavy articles, for this can be taken care of by mechanical devices."

G. E. Hoffman, Sec., Monument Pottery Co., Trenton, N. J.

"Night work should be prohibited absolutely, and rest periods of 10 minutes should be allowed in the middle of each morning period."

Gladys L. Palmer, 224 North 29th St., Philadelphia, Pa.

"Much better rest and toilet rooms will have to be provided in the shops. Women should be provided with comfortable seats, and they should be allowed to use them as much of their working time as possible. Safety-guards must be made suitable for women workers. Good light, heat and ventilation are important to men workers, but are of vital importance to women workers. Streets leading from factory to street car line should be well lighted and policed and kept clean. A skilled nurse should be provided where a large number of women are employed."

Geo. J. Stuart, Chief Engineer, Pittsburgh Valve, Foundry & Construction Co., Pittsburgh, Pa.

"In this state—Massachusetts—enforce existing laws."

E. V. Hickey, Ex. Sec., The Commonwealth of Mass. Bureau of Immigration, State House, Boston, Mass.

"Proper ventilation, safety appliances, and protection to dangerous parts of machinery. Proper toilet facilities, separate from men, washing facilities, retiring room or hospital room."

Stephen E. French, Athol Machine Co., Athol, Mass.

"The changes necessary will depend whether women have been employed previously by the plant. Every plant ought to have a rest room, adequate dressing room, separate toilet rooms, etc. Seats with backs should be provided for every worker. If the work requires the women to stand, they should be allowed to sit at certain intervals. Proper safeguarding of machinery, protection against fumes, handling poisonous materials, etc., and restriction upon employment at dangerous or hazardous processes, ought to be provided by law. In all cases, careful inspection of the work place and occupations ought to be made before women are employed."

Louise C. Odencrantz, Supt. Women's Dept., Dept. of Labor, State Industrial Commission, 310 Jay St., Brooklyn, N. Y.

"Very few changes are necessary, providing factories have been run on a moderately respectable scale. Accommodations will have to be provided the same as would be provided in any public institution catering to the trade of both male and female, and each institution would have to become thoroughly familiar with the laws of the particular state in which they are located."

Messrs. Swan & Adams, Cleveland Hardware Co., Cleveland, Ohio.

"The proper working conditions will undoubtedly provide for women overseers in relation to those factories that are peculiar to women. It may also be necessary in certain industries to provide separate departments where they will be entirely separate from the men. This will very largely

depend on the state laws that may exist according to the locality. Social division will again depend very largely on locality. In certain places, undoubtedly manufacturers will have to assist the local authorities in case they hire large numbers of women where foremen are not employed. In this connection the Y. W. C. A. would help considerably.
E. E. Nock, Towle Manufacturing Co., Newburyport, Mass.

"Provide a dining hall where women can eat the noon-day meal, so they are not compelled to buy from cheap restaurants, or from street vendors, and eat their noon meal in the street, without suitable clothing. Women cannot give efficient service with a handkerchief in one hand."
F. Oscar Race, Sales Mgr., O. A. Rogers Tool & Die Works, 150 Bloomfield Ave., Bloomfield, N. J.

"Men and women workers should be separated as much as possible. We have found that one man can cause more discontent and trouble among women than anything else. This one thing has caused more trouble than any other one thing in our business. In a great many shops the method of management will have to be changed from bossism to management or leadership, because women that have not had to work for a living and have little experience in working in factories will not submit to being talked to as roughly or abruptly as some foremen are in the habit of doing."
C. L. Pool, Sherman Overall Manf. Co., Sherman, Texas.

**What Social Conditions Will We Have to Provide?**

"Not many except in new centers; then help them—don't force them."
F. A. Flather, Boott Mills, 79 Milk St., Boston, Mass.

"Do not think social conditions should be considered as a part of manufacturing for war by the manufacturers. This is something for the city governments to take up."
F. R. Still, Vice-Pres. & Sec'y, American Blower Co., Detroit, Mich.

"There is no possibility of normal social conditions in war times. That we do not lose hope—that is the great thing."
Mrs. Marie S. Moore, 240 Hamilton Ave., Trenton, N. J.

"If women are brought in from outlying districts and housed in any sort of boarding houses or rooming quarters, it will be necessary to provide the right kind of social conditions for them. Something along the work which is laid out by the Y. W. C. A. would undoubtedly be necessary."
H. H. Leonard, The Turner & Seymour Mfg. Co., Torrington, Conn.

"If they are left to themselves, the women will take care of that."
A. S. Hills, Treas., Haydenville Co., Haydenville, Mass.

"It is possible that the women of the locality should be organized to take up this question, so that the proper surroundings would be made for the workers."
John Knickerbocker, Pres. & Mgr., Eddy Valve Co., Waterford, N. Y.

"We have a gymnasium which is also used as an Assembly Hall, and a certain amount of social life is encouraged among our own people."
W. J. Kilpatrick, Mgr., Burroughs Adding Machine Co., Detroit.

"Women employees do not as a rule live near the factory, many working in factories on the other side of a city, while they could be employed in their own vicinity; therefore it should be our object to make our women





employee proud, instead of ashamed, to have her neighbors know she works. The rest room with an attendant schooled along social service lines can be of great help in relieving this condition."
F. Oscar Race, Sales Mgr., O. A. Rogers Tool and Die Works, 150 Bloomfield Ave., Bloomfield, N. J.

"In addition to the usual successful welfare plans such as are now being operated, including reading rooms, entertainment such as music, moving pictures, dancing and the customary methods of social intercourses, there should be a strong provision for educational work, provide for physical exercise as well as mental, and in addition to all this there should be a great effort to associate the workers with the general social conditions of the community in which they are a part."
J. O. Craig, Pres., Business Men's Clearing House, Chicago, Ill.

"Neighborhood recreation centers."
Edw. V. Hickey, Ex. Sec'y, The Commonwealth of Mass. Bureau of Immigration, State House, Boston, Mass.

**What Hours Should Women Work and How About Rest Periods, Fatigue and the Like?**

"Our ideal, not yet consummated: an eight-hour working day, with a rest period of ten minutes in the morning and afternoon, on the company's time."
E. V. Price, Employment Mgr., The Narrow Fabric Co., Reading, Pa.

"In our line of work we find that eight hours are sufficient, and a woman cannot stand longer hours provided that she works hard. We have lately been trying out a plan for rest on some of the operators, and have gotten very satisfactory results. In one case, by letting an old operator (one who has been there for five years) take five minutes' rest every hour during the day, that she made about four dollars' increase above her average weekly pay."
C. L. Pool, Sherman Overall Manf. Co., Sherman, Texas.

"Adopt the present English standards, viz.: eight-hour shift divided as follows:

Work two hours, rest fifteen minutes; work two hours, half hour lunch; work two hours, fifteen minutes rest; work one hour, quit. The women are encouraged to leave the environment of the plant for the rest periods."
T. F. Halpin, Secy., The A. P. Smith Mfg. Co., East Orange, N. J.

"The hours that women should work are largely dependent on the particular operation to be performed. Such hours as will permit maximum of production per human energy until taken over a life period. Fatigue is a plain warning that the above relationship is being violated. Rest periods, recreation, etc., are intelligent natural ways of eliminating it. Of course, the consensus of opinion in this country, if not everywhere else, is accepting the promise that eight hours makes a fair working day."
Elizabeth B. Neustadt, 69 West 11th St., New York City.

"Not over 54 hours. Rest periods should be experimented with—not jumped at. No overtime. Use men on night shift."
F. A. Flather, Treas., Boott Mills, 79 Milk St., Boston, Mass.

"An interesting job need have no time limit, and to do a needful work would be the joy of interested women, who would otherwise be entirely miserable as the events of the war contributed to their unhappiness."
Mrs. Maria S. Morse, 240 Hamilton Avenue, Trenton, N. J.

"Periods of rest, etc., should be left to a general degree to the discretion of the workers and to the forelady in charge.
B. W. Dezotell, B. F. Sturtevant Co., Boston, Mass.

"A maximum of fifty hours per week and not longer than ten hours in any one day. Our conclusions in this respect are verified by the investigations recently made by the United States Commission to England."
W. A. Grieves, Asst. Secy., Jeffrey Mfg. Co., Columbus, Ohio.

"Brain workers, 7 or 8 hours. Hand workers, 9 or 10 hours. The first law established is sufficient, one day out of seven for rest. How many hours a day did our good mothers work, and what did they know about "fatigue," vacations, etc.? I will admit that they didn't have as much fun, but lived longer."
E. S. Webster, 1009 Lincoln St., W., Mishawaka, Ind.

"Eight hours daily and one day a month off."
E. C. Shaw, B. F. Goodrich Co., Akron, Ohio.

"If women are to do the work of men and draw the salaries of men they should work the same hours as men in industrial activities. If they are not on the same basis as men as to salary, they should be granted shorter hours with suitable rest periods to relieve fatigue. In the writer's judgment, women in industry should not work more than six hours."
F. B. Milhoan, American Rolling Mill Co., Chicago, Ill.

"Working hours for women in the factory are from 7:10 A. M. to 11:30 A. M. and from 12:30 P. M. to 5:00 P. M., one hour being allowed for lunch which can be secured in the restaurant within the plant. Women workers sit at their work on chairs provided with backs, and are allowed to retire to the rest rooms whenever they find it necessary. We are now considering the advisability of rest period. Thus far, however, it has not appeared to be necessary."
Wm. J. Fitzpatrick, Factory Manager, Burroughs Adding Machine Co., Detroit, Mich.

**How Will We Arrange to Subdivide and Arrange the Operations So That Women Can Efficiently Perform Them?**

"A careful analysis should be made of all operations to determine in what way the work may be divided or distributed to allow women to handle that part of the work which they are capable of doing. This would call for the segregation of the more arduous tasks and having men handle them, assigning the lighter and faster operations and the handling of automatic machinery to the women. The experience of the European countries in the selection of industrial work for women, which has been broader than ours, should be studied and consulted."
D. A. Gilbert, Employment Dept., Hotpoint Electric Heating Co., Chicago, Ill.

"The work must be absolutely standardized. It should be subdivided





into the greatest number of elementary parts consistent with machines and efficiency."
Geo. J. Stuart, Chief Engineer, Pittsburgh Valve, Fdy. & Construction Co., Pittsburgh, Pa.

"A woman may be permitted to handle a very complicated operation, but in any event I believe that we should divide the operations into their minute units and to have a careful description to cover the operation and method of handling such unit arranged. If the woman that we secure is not capable of handling such operation this will permit us to give to her a small sub-operation, and if the woman is capable of handling a number of operations or complicated operations, these sub-divisions will enable her to grasp better the details of the same."
S. E. Stout, Betterment Mgr., Whiting Fdy. Equipment Co., Harvey, Ill.

"It will be necessary to subdivide the operation much more than we have ever thought necessary in the past. As a rule the simpler the operation the more efficiently women can perform them. This is too broad a subject to handle in a general way, but it will be necessary to give each particular case a great deal of study along these lines in order to get the maximum efficiency."
H. H. Leonard, The Turner & Seymour Mfg. Co., Torrington, Conn.

"All operations on parts are enumerated on cards which go with the work. The operations to be performed by women are decided upon in advance, and the new employees are usually instructed in advance; therefore, we have encountered no difficulty in arranging the operations for women workers."
Wm. J. Kilpatrick, Factory Manager, Burroughs Adding Machine Co., Detroit, Michigan.

"We are manufacturers of gears, and so far as our individual work is concerned, it would be mainly on drill presses, turret lathes and gear cutters, and naturally divides itself into operations that could be readily taught to the operators in a reasonable length of time."
Edw. J. Frost, Frost Gear & Forge Co., Jackson, Mich.

"Eliminate lifting. Provide conveyors and power lifters so as to make the work easy to handle, then the operation is a machine tool operation and can be done efficiently."
F. R. Still, Vice-Pres. & Secy., American Blower Co., Detroit, Mich.

"The subdivision of the work so she is not doing the same thing all the time, teaching each operator two distinct operations, changing her from one to the other at various times to break the monotony."
F. Oscar Race, Sales Mgr., O. A. Rogers Tool and Die Works, 150 Bloomfield Ave., Bloomfield, N. J.

"Is also one which it is necessary to meet according to the condition prevailing in the individual plants. We would say in general, however, that it is most desirable to allow women, as well as men, to perform only one operation in the production of any material."
W. A. Broadhead, Jamestown Worsted Mills, Jamestown, N. Y.

"This will have to be worked out separately in each factory to meet

local conditions. The greater the subdivision, the easier it will be to teach the women operators to perform them."

Geo. L. Rice, International Harvester Co., Chicago, Ill.

"The operations should be analyzed and tested with regard to physical strain, and the relative efficiency of men and women in performing them. Some processes requiring finger deftness can be done more efficiently by women than men, while in other cases, tests may show that a greater number of women than men is required to perform a piece of work. In so far as practical, men should be withdrawn from operations which women can do equally or more efficiently, and be retained or placed in those in which men excel."

Louise C. Odencrantz, Supt., Women's Dept., State Industrial Commission, 310 Jay St., Brooklyn, N. Y.

**How Will We Train Women and Who Will Do It?**

"The training of women upon their first entering industrial life is important. This should be entrusted to persons not only familiar with the work to be done, but who will exercise a sympathetic attitude toward these beginners. Where it is impracticable to have special instructors, department foremen or foreladies should be schooled to direct women operatives with unusual care, patience, and personal consideration."

F. G. Smith, Pres. and Gen. Mgr., The Osborn Mfg. Co., Cleveland, Ohio.

"Select several middle-aged sensible women, put them under instructions of a man of good moral standing, then have the women later take charge of the newer and more timid ones until they can be taken in full charge of by a male foreman."

R. K. LeBond Machine Tool Co., Cincinnati, Ohio.

"Train a few bright women at first to act as instructors, then when they have adapted themselves to the work and are familiar with it, have them train a few at a time until an organization is built up."

C. Hitchcock, Farrell Foundry & Machine Co., Ansonia, Conn.

"Most of our operations have had to be divided and laid out so that they could be taken hold of easily by the most ignorant immigrants. We can not see any difficulties at all in training the class of women available to take on this work at once."

The Holmes & Edwards Silver Co., Bridgeport, Conn.

"If they are to become very proficient it would be necessary for them to undergo the same training as men do in the various lines of work."

B. L. Strickland, Sec. & Treas., J. S. Mundy Hoisting Engine Co., Newark, N. J.

"In the factories—by selected teachers, paid by the industry, and on employer's time."

Edw. V. Hickey, Ex. Sec'y, The Commonwealth of Massachusetts, Bureau of Immigration, State House, Boston, Mass.

"There will always be enough old men left in the shop to carry on the training."

Earl J. Woods, J. I. Case Plow Works, Racine, Wis., Sales Dept.

"We find it no more difficult to train women to perform certain operations than men of the same class. In fact, we believe they are more apt than many men." A. S. Perkins, Sec'y, The Delphos Mfg. Co., Delphos, Ohio.

# DIGEST OF LAWS AFFECTING WOMEN IN INDUSTRY

| STATE | LAW | MAXIMUM HOURS DAY | MAXIMUM HOURS WEEK | NIGHT-WORK ALLOWED | MINIMUM WAGE | Weight Limit Allowed | FEMALE CHILD LABOR AGE LIMIT | Forbidden Occupations | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Alabama | No Law | .... | .... | Yes | None | .... | 14 yrs. (1) | Mining | |
| Arizona | Penal Code 1913 Sec. 717 | 8 | 56 | Yes | None | .... | 14 yrs. (1) | Mining All work that requires constant standing. | |
| Arkansas | Code 1915 Sec. 191 | 9 | 54 6-day week | Yes | (9) BEP $1.25 per day; $6.09 first 6 mos.; $7.50 after 6 mos. | .... | 14 yrs. | Mines | |
| California | Amended Law 1913: com. | 8 | 48 | Yes | (9) BEP 16c. 13c. per hour. Pound Scale of wage also. Dept. Stores $43.33 month | .... | 14 yrs. | -?- | |
| Colorado | 1912 | 8 | 56 (8) | Yes | (9) BEP (limited) $20 per month $1 per day | .... | 16 years without school certificate; 14-16 if certificate obtained | Mines | New Laws Pending |
| Connecticut | Amended Law 1909 | 10 See Remarks Col. | 55 See Remarks Col. | Yes After 10 P. M. prohibited in mercantile establishments. | None | .... | 14 years | Saloons | Allowed working-hours vary according to pursuit |
| Delaware | Law 1914 | 10 See Remarks Col. | 55 See Remarks Col. | Yes Limited to in 24 hours if any part falls between 11 P. M. and 7 A. M. | None | .... | 14 yrs. | -?- | Exceptions as to hour limitations in interests of certain conservations' |
| District of Columbia | -?- | 8 | 48 | -?- | None | .... | -?- | -?- | |
| Florida | -?- | No Limit | No Limit | Yes | None | .... | (3) Newsboys, 10 yrs.; Day Messengers, 12 yrs.; Night Messengers, 18 yrs. Factories, 14, with permit; Factories, 16, without permit. | -?- | |
| Georgia | Amended Law 1911 | 10 | 60 | Yes | None | .... | 14 yrs. | -?- | |
| Idaho | 1913 | 9 | ... | No Laws | None | .... | .... | Saloons | |
| Illinois | Amended Law 1911 | 10 | 70 (8) | Yes | None | .... | 14 yrs. (1) | Mines | |
| Indiana | 1901 | .... | .... | Forbidden from 10 P. M. to 6 A. M. in Manufacturing. | None | .... | .... | Mines | |
| Iowa | -?- | No Limit | No Limit | Yes | None | .... | 14 yrs. | -?- | |
| Kansas | Law 1915 (Com.) | 9 | .... | Forbidden after 9 P. M. the mercantile establishments. | (9) BEP (inoperative | .... | 14 yrs. | -?- | New Laws Pending |

| STATE | LAW | MAXIMUM HOURS DAY | MAXIMUM HOURS WEEK | NIGHT-WORK ALLOWED | MINIMUM WAGE | Weight Limit Allowed | FEMALE CHILD LABOR AGE LIMIT | Forbidden Occupations | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Kentucky | 1912 | 10 | 60 | Yes | None | .... | 14 yrs. (1) | -?- | |
| Louisiana | Law and Amendments—1908, 1914–1916 | 10 | 60 | Yes; if 18 yrs. or over | None | .... | 14 yrs. | Saloons Cannot clean moving machinery | |
| Maine | 1915 | 9 | 54 | Yes | None | .... | 14 yrs. | -?- | |
| Maryland | Amended Law 1916 | 10 | 60 | 8 hours in 24 if work falls between 10 P. M. and 6 A. M. | None | .... | -?- | Mines Saloons | |
| Massachusetts | Law and Amendments 1909, 1913, 1915, 1916 | 10 | 54 | (A) 6 P. M. to 6 A. M. in textile manufactures. 10 P. M. to 6 A. M. in all other manufactures. (B) 6 A. M. to 10 P. M. textile industry; not after 10 P. M. (7) *See Remarks Column* | $0.15 per hour $8 per week | 75 lbs. or more | 16 yrs. | -?- | (A) and (B) represent compilations by "American Machinist" and Merchants Bank, respectively. Note contradiction. **Probably** (A) refers to "forbidden" and not "allowed" hours. |
| Michigan | Law and Amendments | 10 | 54 | No | None | .... | 15 yrs. | Saloons | |
| Minnesota | Law 1913 (Com.) | 9 | 54 (5) | Yes | (9) BEP $9 to $8.75 $8.25 to $8.00 weekly | .... | -?- | Cannot clean moving machinery | |
| Mississippi | 1914 | .... | 60 | Yes; if over 16 years | None | .... | 14 yrs. | -?- | |
| Missouri | 1909 | 9 | 54 | Yes | None | .... | 16 yrs. | Mines Saloons | |
| Montana | 1913 | 9 | 56 (8) | Yes | None | .... | 16 yrs. | Saloons | |
| Nebraska | Amended Law 1915 | 9 | 54 | (A) 10 P. M. to 6 A. M. in in cities over 5,000; specified pursuits. (B) 6 A. M. to 10 P. M. *See Remarks Column* | (9) BEP (inoperative) | .... | 16 yrs. | -?- | (A) and (B) represent compilations by "American Machinist" and Merchants Bank, respectively. Note contradiction. |
| Nevada | -?- | .... | 56 | Yes | -?- | .... | 16 yrs. | -?- | |
| New Hampshire | Amended Law 1913 | 10 1-4 | 55 | Yes | None | .... | 16 yrs. | Saloons | |
| New Jersey | Amended Law 1912 | 10 | 60 | Yes | None | .... | 14 yrs. (1) | -?- | |
| New Mexico | -?- | -?- | -?- | -?- | -?- | .... | -?- | Saloons | |
| New York | Law and Amendments 1909, 1912, 1913, 1914, 1915 | 9 | 51 6-day wk. | (A) 10 P. M. to 6 A. M. and 10 P. M. to 7 A. M. according to classifications of work and population. (B) No *See Remarks Column* | None | .... | 14 yrs. | Saloons Mines. Cannot bake cores in foundry in certain conditions. Operating emery and polishing wheels. | (A) and (B) represent compilations by "American Machinist" and Merchants Bank, respectively. Note contradiction. |
| North Carolina | 1911 | .... | 60 | Yes; if over 16 yrs. | None | .... | 12 yrs. | -?- | |
| North Dakota | -?- | .... | 60 | Yes | None | .... | 14 yrs. | Operating emery and polishing wheels. | |
| Ohio | October, 1917 | 9 | 50 | Yes; if over 21 yrs. | None | .... | 16 yrs. | -?- | |
| Oklahoma | -?- | 9 | -?- | Yes; if over 18 yrs. | None | .... | 16 yrs. | Mines | |

DIGEST OF LAWS AFFECTING WOMEN IN INDUSTRY

| STATE | LAW | MAXIMUM HOURS DAY | MAXIMUM HOURS WEEK | NIGHT-WORK ALLOWED | MINIMUM WAGE | Weight Limit Allowed | FEMALE CHILD LABOR AGE LIMIT | Forbidden Occupations | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Oregon | Com. Final Legislation 1913 | 9 | 50-54 6-day wk. | Prohibited after 6 P. M. excepting in specified work. After 8:30 P. M. outside Portland (with exceptions). **Law contains specific provisions for rest-time.** | (A) BEP $6 to $9 weekly to $40 monthly. (B) In Portland, $8.64; elsewhere, $8.25 (4) | .... | 14 yrs. (2) | -?- | |
| Pennsylvania | -?- | -?- | 54 | No | None | .... | 14 yrs. | Mines | |
| Rhode Island | -?- | -?- | 54 | Yes | None | .... | 14 yrs. | -?- | |
| South Carolina | -?- | -?- | 60 | Yes | None | .... | 14 yrs. | -?- | |
| South Dakota | -?- | -?- | 60 | Yes | None | .... | 14 yrs. | -?- | |
| Tennessee | -?- | -?- | 57 | Yes | None | .... | 15 yrs. | -?- | |
| Texas | 1915 | 9 | 54-60 (8) | Yes | None | .... | 15 yrs. | Saloons | |
| Utah | 1911-1915 | 9 | 54 | Prohibited after 6 P. M. in cities of 10,000, with conservative clause and Christmas-time provision. | (9) BEP $1.25 and 90c. per day | .... | -?- | Mines Saloons | |
| Vermont | 1913 | 11 | 56-58 | Yes | None | .... | 14 yrs. | Saloons | |
| Virginia | Amendments 1912-1914 | 10 | 60 | Yes | None | .... | 14 yrs. | Mines | |
| Washington | 1911 (Com.) | 8 | 56 (8) | Yes | (A) (9) BEP $6 to $10, classified. (B) Adult, $8.90. | .... | 16 yrs. | Mines Girls under 18 cannot be "shakers" in laundries. | New Laws Pending |
| West Virginia | -?- | No Limit | No Limit | Yes | None | .... | 16 yrs. | Mines Cannot clean moving machinery. | |
| Wisconsin | Amendments 1913 (Com.) | 10 | 55 | (6) Yes. (A) Work limited to 8 hours per night; 48 hours per week of nights, and all falls between 8 P. M. and 6 A. M. on **more than one** night. (B) Not in factories or laundries. | (9) BEP (held-up) | .... | 14 yrs. Labor permit required to 17 yrs. | Mines | |
| Wyoming | -?- | 10 | 56 | Yes | None (9) BEP (held-up) | .... | 14 yrs. | Mines | New Laws Pending |

**NOTES:**

(1) School certificate required.
(2) Certain age-limits for special occupations.
(3) Newsboys, 10 years; Day Messengers, 12 years; Night Messengers, 18 years; Factories, with permit, 14 years. Factories, without permit, 16 years.
(4) Outside of Portland, $8.25; in Portland, $8.64.
(5) Manufacturing, 54 hours; Mercantile, 58 hours; Manufacturing (outside of cities), 58 hours.
(6) Not in factories or laundries.
(7) Not after 6 P. M. in Textile Industries.
(8) Presumably, allows a 7-day week.
(9) BEP means minimum rates are described by law as "based on economic principles."

MSH 21696

END OF
TITLE